

PROPERTY TAXATION OF PUBLIC
UTILITIES IN VIRGINIA: ASSESSMENT
ADMINISTRATION AND PRACTICE

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CHAPTER 1

INTRODUCTION

The publication in 1776 of Adam Smith's Wealth of Nations marked the initial enumeration of "canons of taxation," criteria for the evaluation of the merits and weaknesses of individual taxes and their effect upon whole systems of taxation. These criteria held that a good tax system must be characterized by equity, certainty, convenience to the taxpayer, and economy in collection, and they have provided the source for most of the modern principles for evaluation.¹

The growth in population, expansion in territory, industrialization, urbanization and the changing concept of government's role and function have resulted in an assumption of increased fiscal responsibility by governments and a consequent search by federal, state and local governments for more and more tax revenue. In this search for

¹An examination of general taxation as it exists in the United States today leads one to the observation that the question of a tax or a tax system being "good" in keeping with these criteria is largely academic. See R. M. Haig, "Taxation," Encyclopedia of the Social Sciences, Vol. XIV, pp. 538-540; A. H. Hanson and H. S. Perloff, State and Local Finance in the National Economy (New York: W. W. Norton and Company, Inc., 1944), pp. 250-256.

additional revenue the federal government has led the way. The ratification of the Sixteenth Amendment to the United States Constitution, popularly known as the "Income Tax Amendment," bestowed upon the federal government the power to so lead the way.

The text of this sweeping amendment is both brief and to the point, leaving the intent clearly understood: "The Congress shall have the power to lay and collect taxes on income, from whatever source derived, without apportionment among the several states, and without regard to any census or enumeration." The increase in federal taxes which has stemmed from the exercise of this power of access has served to make the financing of state and local government more and more difficult.

Though the purpose of this study is not to explore the multiplication and growth in federal taxation, the above comments do lead to three observations. First, federal taxation, in its efforts to extract from the taxpayers more and more dollars of revenue for federal purposes, has all but exhausted the readily available sources. Second, state and local governments, to match federal funds on the one hand and to compete with federal authority over their citizens on the other, have been forced to renew their demands on those sources of taxation not pre-empted by the federal government. Finally, the taxpayer, subjected to such crossfire, has developed a keener sense of awareness in the area of taxation, forcing all levels of government

to strive for greater equity and fairness in taxation or, as an alternative, to engage in subterfuge.

The Problem

Illustrative of one problem of taxation is the ad valorem tax as imposed on the public utility industry. This study is specifically directed toward the electric light and power industry in Virginia with the assumption that the observations and conclusions presented herein are possessed of reasonable applicability to the public utility industry generally.²

This study will encompass three broad areas. First, an examination of the assessment practice in Virginia will reveal whether the assessment of public service corporation property differs from the assessment of nonutility property. Second, since the question of equity in taxation can be considered only by reference to the total tax burden, the method of classification of property as well as of rates of taxation will be considered. If inequities are found it is insufficient merely to point them out; therefore, the third area of coverage in this work consists of proposals to rectify those inequities uncovered during the course of this investigation.

²Data and research facilities have been provided by the Appalachian Power Company, a subsidiary of the American Electric Power Company. See Appendix A for map showing the section of Virginia served by the Appalachian Power Company.

Specifically, this study is concerned with the possibility of inequitable ad valorem taxation of public utility property in Virginia which might arise from the allocation of centrally assessed values to the taxing localities or from the imposition of local rates of taxation. Where inequities are found to exist in these two specific areas some attempt will be made to develop corrective procedures.

Limitations of Study

This study of public utility ad valorem taxation is first limited geographically to a consideration of one state only, Virginia. Further, attention has been focused on the electric light and power industry in Virginia. Both of these limitations were necessitated by the physical difficulties of conducting a personal investigation in more than one industry or in more than one general geographical area; however, it is believed that neither the data nor the problems considered are peculiar to Virginia or to the electric light and power industry. On the other hand, the data and observations presented herein concerning the electric light and power industry in Virginia should not be considered as necessarily representative of all public utility industries in all states. However, a review of the literature indicates that these and related problems exist generally throughout the country and that the major

difference between the problems of the various utility industries and between the various states is mainly one of degree.³

As stated earlier, one of the purposes of this study is to investigate the possible inequities which might arise from the allocation of centrally assessed values to the localities for imposition of local tax rates. It should be noted that the allocation process is not the only way in which discriminatory or inequitable ad valorem taxation can be effected on public service corporation property. This study is mainly concerned with the allocation of centrally assessed values after such values have been determined. The determination of assessed values, although given some consideration, is not given detailed consideration for the following reasons. First, just what constitutes value for public utility property where no active market for such property actually exists has been a problem plaguing economists and tax assessors for years. Much has been written and many theories have been advanced; however,

³An indication of the widespread interest in this and related problems can be found in the annual Proceedings of the National Tax Association.

there appears to be no generally accepted evidence of value⁴ although certain "guides" are available to the interested.

Second, the determination of value for ad valorem purposes is not, at the present time, of any real significance in Virginia.⁵ The Virginia practice of assessing public utility property at original cost, less an approximate depreciation allowance of 20 per cent, based on depreciation studies conducted by the Virginia Department of Taxation, apparently has been accepted by both the utilities and the State Corporation Commission. There is, of course, no excuse for continuing an assessment procedure which has obvious defects; however, there is little disagreement over this method in Virginia and it has been deemed beyond the scope of this study to consider as a problem an area in which no problem apparently exists.

⁴ In its Appraisal of Railroad and Other Public Utility Property for Ad Valorem Tax Purposes, the Committee on Unit Valuation of the National Association of Tax Administrators reports that: "There are several types of evidence that are commonly used in making appraisals." This report suggests that among those to be considered are: "(1) capitalized earnings, (2) market prices of stock and debt, (3) original cost less depreciation, and (4) replacement cost less depreciation." The report goes on to advocate some combination of capitalized earnings and stock and debt evidences. (Page 3.) See also "Guide for Assessment--Sales Ratio Studies," a report of the Committee on Sales Ratio Data of the National Association of Tax Administrators, dated June, 1954; "Guide for West Virginia Assessors," dated January 1, 1958.

⁵ See Chapter 5.

Economic Considerations

In the examination of the property tax structure in Virginia it is probable that certain inequities shall be discovered, as they must be in an examination of any tax system created by man; however, it is difficult to grasp the concept of inequity without personification. It is impossible for a corporation to be inequitably treated since equitable treatment is solely a human attribute. It is necessary, then, when investigating the state and local property tax structure as to its equity, to inquire just who is it that is treated inequitably? Is it the stockholder of the public service corporation? Is it the consumer of utility services? Is it the owner of other property?

For purposes of economic analysis the sole criterion for measuring equitable treatment of stockholders rests in the compensation necessary to call forth their capital in sufficient quantities to insure uninterrupted service by a growing industry. There is no evidence that such capital has not been forthcoming in the past, as confirmed by the fantastic growth in the electric power industry to meet the needs of the consuming public. Though it may be argued that "inequitable" tax treatment of utility property has so impaired the rate of return to investors as to make the raising of capital more difficult, actual facts indicate that this problem is not significant. In the first place, present rates of return apparently are adequate to call

forth sufficient capital to meet current needs, indicating that if inequitable property taxation exists it is not presently inequitable to stockholders. Second, most regulatory commissions, following the "end result" doctrine,⁶ would probably allow, if demand were sufficient, a return to the investors of capital which would be adequate to call forth such capital, inequities in taxation notwithstanding. To the extent that regulatory commissions in the future fail to allow upward rate adjustments, necessitated for example by discriminatory taxation, then the stockholders might well have room for protest on the grounds of unwarranted confiscation of property. This has not yet taken place and the future is still speculative.

For purposes of the present analysis, it is believed that any inequities which might exist in the taxation of public service corporations have not necessarily been imposed upon the investor. If they had, capital would not have been forthcoming to the utility industry due to an insufficiency in the rate of return, and this has not, fortunately, been the case. It follows, then, that the consumer of utility services is ultimately the one on whom the burden of taxation must fall, and where there are inequities in the taxing system it must be the consumer who is inequitably treated as long as the demand for utility

⁶Federal Power Commission v. Hope Natural Gas Co.
(320 U.S. 591), 1944.

services remains relatively inelastic. Property taxes levied by one county, for example, must be paid by someone. When the burden of these taxes can be shifted to the citizens of another county, or a city, it is not the company which is being inequitably treated but rather the consumers of that company who must pay someone else's bill. Where there are defects in the assessment practice or in the administration of the tax system, it is again not the company which is being discriminated against but rather people, and these people are most likely the consumers. Thus, it should be kept in mind that "inequities" as discussed in this study refer to people, although for purposes of presentation this point is not often emphasized.

Preliminary Investigation

Before making the more detailed investigation of the property tax system in Virginia as it affects public service corporations, the results of which comprise the basis of this thesis, it was necessary to make a few preliminary inquiries in order to ascertain whether Virginia was indeed faced with any problems in this respect and, if so, to what extent were they serious enough to warrant the more detailed investigation. It was observed that the Virginia Constitution, as is the case in most state constitutions, calls for uniformity in taxation. One aspect of uniformity in taxation is the assessment of property; therefore, it was undertaken in these preliminary

investigations to measure the extent to which assessing in Virginia achieved a reasonable degree of uniformity.

The measuring standard favored by assessing experts is the "coefficient of dispersion," or "coefficient of deviation," which is the percentage which the average of the deviations of the assessment ratios of properties from their median ratio bears to their median ratio.

Dr. John H. Russell, the former director of research for the Virginia Department of Taxation, referred to this measure as an "index of assessment inequality."⁷ The method of computation for this measure is as follows. First, the median assessment ratio of the individual assessment ratios in the sample is determined. Second, the deviation in percentage points of each individual ratio from the median ratio is determined, and the sum of these deviations is divided by the number of ratios to ascertain the average deviation. The coefficient of dispersion is then derived by dividing the average deviation by the median ratio. Assume, for example, that eleven pieces of

⁷Cited by J. Edward Rountry, "Equalization at Market Value," Appraisal Journal, Vol. XXIV, No. 2, April, 1956, p. 222.

property each have a market value of \$30,000. The computation of the "index of assessment inequality" can be illustrated as follows:

<u>Property</u>	<u>Assessed Value</u>	<u>Assessment Ratio</u>	<u>Deviations from Median</u>
1	\$ 1,800	6.0%	-19.0
2	3,000	10.0	-15.0
3	3,600	12.0	-13.0
4	4,500	15.0	-10.0
5	6,000	20.0	- 5.0
6	7,500	25.0	0.0
7	10,500	35.0	10.0
8	14,400	48.0	23.0
9	17,700	59.0	34.0
10	18,600	62.0	37.0
11	21,300	71.0	46.0
Total deviations			212.0
Average deviation			19.3
Index of assessment inequality (coefficient of dispersion) equals			77.2
(Average deviation, 19.3, divided by the median ratio, 25.)			per cent

It is seen in the above illustration that the coefficient of dispersion is 77.2 per cent. This relatively high coefficient stems from the lack of uniformity in the assessment ratios. Assume, however, that the same properties

are assessed at a more uniform rate. The following is observed:

<u>Property</u>	<u>Assessed Value</u>	<u>Assessment Ratio</u>	<u>Deviations from Median</u>
1	\$ 9,000	30.0%	-10.0
2	9,900	33.0	- 7.0
3	10,500	35.0	- 5.0
4	10,800	36.0	- 4.0
5	11,400	38.0	- 2.0
6	12,000	40.0	0.0
7	12,600	42.0	2.0
8	13,200	44.0	4.0
9	14,100	47.0	7.0
10	14,400	48.0	8.0
11	15,000	50.0	10.0
Total deviations			59.0
Average deviation			5.4
Index of assessment inequality (coefficient of dispersion) equals			13.5 per cent

(Average deviation, 5.4, divided by median ratio, 40.0.)

With a higher degree of uniformity, then, the coefficient of dispersion is seen to be relatively low. There is some question as to just how low the coefficient of dispersion must be in order for a locality to qualify as a "good" locality, with respect to making reasonably uniform assessments; however, Dr. Russell is reported to have established, over twenty-five years ago, that "' an index as low as 20 should be considered a goal desirable of achievement and reasonably attainable,' that anything below this is to be considered as an excellent degree of

equalization for uniformity," and that " 'an index as high as 45 should be judged cause for the gravest concern.' "⁸

It should be noted that, in the preceding illustration, where there was illustrated a low "index of assessment inequality," even lower than the 20 per cent suggested by Dr. Russell as desirable, the assessed values varied 25 per cent, plus and minus, from the median. Therefore, there is some room for argument that the coefficient of dispersion, to reflect really acceptable assessments, should be considerably less than 20 per cent. A Minnesota tax study committee, for example, asserts that "a coefficient of dispersion of 10 per cent or less suggests that the assessor is performing his job well."⁹

With these rough standards in mind, the preliminary investigation of the situation in Virginia was conducted. An examination of the assessment ratios prevailing in two counties and one city revealed that there was "cause for grave concern" of the assessment practice in certain sections of Virginia.¹⁰ The results of this preliminary investigation of the assessment ratios in those localities, and the coefficients of dispersion for each, are shown in Table 1.

⁸Ibid.

⁹Report of the Governor's Minnesota Tax Study Committee, State of Minnesota (St. Paul, 1956), p. 177.

¹⁰Assessment ratios are based on a 1956 study conducted by the Virginia Department of Taxation, the latest such study conducted.

TABLE 1

 MEDIAN ASSESSMENT RATIOS AND COEFFICIENTS
 OF DISPERSION, SELECTED LOCALITIES,
 COMMONWEALTH OF VIRGINIA

	Median Assessment Ratio	Average Deviation from Median	Coefficient of Dispersion ^a
Dickenson County ^b	12.5%	6.8	54.5%
Giles County ^c	14.6	15.2	104.1
Roanoke City ^d	33.6	8.0	23.8

Source: Working papers of the Virginia Department of Taxation for the 1956 real estate assessment ratio study.

^aThe average deviation from the median assessment ratios divided by the median assessment ratio.

^bBased on an examination of all real estate sales made in 1956.

^cBased on an examination of 102 out of 333 real estate sales made in 1956, using random sample technique.

^dBased on an examination of 224 out of 772 real estate sales made in 1956, using random sample technique.

In Roanoke City the "index of assessment inequality" shows that property is being assessed relatively uniformly; however, in the two counties observed, the coefficients of dispersion are shown to be in excess of the 45 per cent which Dr. Russell considered cause for grave concern. In Giles County particularly the coefficient of dispersion shows an extremely wide variation in assessment ratios. Where such a situation exists, as expressed in one study,

" . . . the consequences of such wide variations in assessed valuations for the amount of the property tax burden of the individual taxpayer are staggering. . . ." ¹¹

Further, in the initial examination of Virginia's property tax system, it was noticed that, in addition to the wide variations in the assessment ratios, there was general assessment at less than the 40 per cent ratio which is applied to public service corporation property. The question then presented itself as to whether there is any correlation between low assessments and high coefficients of dispersion. That there is this relationship is shown by the following: ¹²

Median Assessment Ratio for Nonfarm Houses as of 1956	Coefficient of Dispersion Median Area
Less than 20.0%	37.3
20.0 to 29.9%	32.0
30.0 to 39.9%	25.1
40.0% or more	22.2

As an illustration of just how this relationship might affect individual taxpayers, consider the following. Assume there are three pieces of property in a certain locality, each

¹¹ Earnest E. Means and W. W. Martin, County Property Tax Assessment in Florida (Tallahassee: Florida State University, Bureau of Governmental Research and Service, 1957), p. 51.

¹² Taxable Property Values in the United States (Washington: U.S. Department of Commerce, 1959), Table 17, p. 86.

with a fair market value of \$1 million. If the coefficient of dispersion is low, say, 10 per cent, and the total tax desired is \$48,000, and an attempt is made to keep the assessment ratios relatively high, then the distribution of the tax burden is as follows:

Property	Fair Market Value	Assessment Ratio	Assessed Valuation	Share of Tax ^a
A	\$1,000,000	78.0	\$ 780,000	\$14,976
B	1,000,000	80.0	800,000	15,360
C	1,000,000	92.0	920,000	17,664
			<u>\$2,500,000</u>	<u>\$48,000</u>

^a Assessed valuation divided by total assessed valuation times total tax of \$48,000.

On the other hand, if the coefficient of dispersion is high, say, 50 per cent, and an attempt is made to keep the assessment ratios relatively low, then the distribution of a total tax burden of \$48,000 is as follows:

Property	Fair Market Value	Assessment Ratio	Assessed Valuation	Share of Tax ^a
A	\$1,000,000	28.0	\$ 280,000	\$11,200
B	1,000,000	40.0	400,000	16,000
C	1,000,000	52.0	520,000	20,800
			<u>\$1,200,000</u>	<u>\$48,000</u>

^a Individual assessed valuation divided by total assessed valuation times total tax of \$48,000.

In the first illustration, where assessment ratios are high and the coefficient of dispersion is 10 per cent, the owner of Property C will pay \$2,688 more in taxes than the

owner of Property A, due entirely to a difference in the assessment ratios of 24 percentage points. However, in the second illustration, where assessment ratios are lower and the coefficient of dispersion is 50 per cent, the owner of Property C will pay \$9,600 more in taxes than the owner of Property A, again due entirely to a difference in the assessment ratios of 24 percentage points. With high assessment ratios the owner of Property C is mildly discriminated against; however, with low assessment ratios the owner of Property C pays 85.7 per cent more taxes than the owner of Property A. It appears, then, that equality of assessment within a locality, though difficult to obtain under favorable conditions, is much more difficult to achieve when assessments are made at some fraction of a constitutional mandate of full value.

Finally, in order to see to what extent Virginia had a problem worthy of further investigation, a comparison was made of this state with other states in the preliminary investigation. An examination of the U.S. Bureau of Census data revealed that of all the states (48 at the time of that particular study) only three had coefficients of dispersion

in excess of 40 per cent, Virginia being one of these states. The grouping for the states was as follows:¹³

<u>Coefficient of Dispersion</u>	<u>Number of States</u>
Under 10.0%	None
10.0 to 19.9%	21
20.0 to 29.9%	19
30.0 to 39.9%	5
Over 40.0%	3

The causes of relatively high coefficients of dispersion, with the inequalities resulting therefrom, are many; however, centralized control of the assessment function appears to have some direct relation to the problem. In Minnesota, for example, it was held that ". . . the principal handicap to more effective equalization and review at the state level appears to be insufficient staff. Technical positions remain unfilled because the salary authorized does not attract men with the necessary qualifications."¹⁴ Another state's problem in this respect is illustrated by the following comment:

Over the years property assessments in the great majority of Tennessee counties have got sadly out of line, one with another. There are many reasons for this, of which we need mention only a few. One of the main reasons, probably, is that we are still operating under an Assessment Act passed in 1907. This act was an

¹³Taxable Property Values in the United States, op. cit., Table 18, p. 87.

¹⁴Report of the Governor's Minnesota Tax Study Committee, State of Minnesota (St. Paul, 1956), p. 163.

excellent one--for 1907--but it was designed for a horse-and-buggy age and not for the conditions found in Tennessee today. Other contributing factors have been the low salaries paid to assessors and the inadequate help allowed them. In many counties the assessors' salaries are still those which were established by the 1907 act.¹⁵

Although the causes are not clear in Virginia, it might be that the segregation of the property tax function to the localities within the state has been a contributing factor. Further, although the causes may well merit attention, the effects of a "high index of assessment inequality" were deemed to be of even greater importance in this study, particularly as they affect the public service industry which has found its assessment ratio frozen.

The Need for Equalization in Virginia

At one time the major source of revenue to the state government in Virginia was the general property tax, such levy being made upon the assessed values of property located and assessed in the various taxing districts. It was only natural for local assessors to seek to minimize their constituents' contributions to the centralized state government in order to prevent an "undue burden" being placed upon them. Accordingly, assessment ratios were generally

¹⁵Cecil Morgan, "Eleven Counties Start Assessment Reform," Tennessee Planner, Vol. XVIII, No. 2, October-December, 1958, p. 43.

very low. Virginia then embarked upon a plan of restricting taxation on real estate and tangible personal property to the local authorities. This was supposed to alleviate inequities arising from divergent assessment ratios and the discrimination resulting from having one taxing district contribute a disproportionate share to the state government.

Although a particular injustice may have been corrected by segregation of tax sources between levels of government, such a procedure may have done little toward relieving individual taxpayers of any inequities which may have faced them, for it is quite possible for discrimination of this type merely to be transferred from a statewide level to a local level.

In segregating the taxation of real estate and tangible personal property to the localities, it should be noted that the state reserved the more dynamic and potentially greater sources of revenue for itself while giving to the localities the more stable, if less yielding, sources of revenue. It is true, of course, that total property tax collections have increased; however, the proportion of total revenues derived by localities from the taxation of real estate has declined from 69.2 per cent in 1926, to 58.9 per cent in 1959.¹⁶ The cities and counties in

¹⁶Virginia Department of Taxation, staff reports.

Virginia have thus been forced to expand their revenues by means of additional taxing devices to augment the property tax.

The reservation of the property tax for the sole use by the localities, except for the rolling stock of railroads, made necessary some method of equalization of the tax burden between taxpayers located in Virginia but within divergent taxing districts. Although segregation was intended to relieve inequities in the assessing procedure, the transfer of the responsibility to local assessors with no provisions to correct inequities would quite possibly have resulted in a situation worse than the one which was being corrected. Therefore, equalization boards were established by statute in the counties and cities to act primarily upon the complaint of an aggrieved taxpayer. Public service corporation property was also "equalized"; however, the device employed here was State Corporation Commission assessment of utility property at a statewide average assessment ratio, computed at the time to be 40 per cent of "market value."

Local equalization boards, as established in Virginia, act upon the instigation of aggrieved property owners; therefore, taxpayers must first know and be able to prove an injustice in the assessment of their property and then be willing to take their case to the equalization board if they are to obtain relief. That the average taxpayer and property owner is possessed of sufficient knowledge

to adequately present his case is subject to some doubt. It is for this main reason that local equalization boards have probably been somewhat ineffectual in achieving their proper goal.

One of the tasks of this thesis is to examine the effectiveness of the other equalization procedure, namely, the equalization of public service corporation property by assessing such property at 40 per cent of its market value. A few of the more important questions to be considered are: Has the average statewide assessment ratio remained at 40 per cent since this ratio was originally determined? Is it equitable to assess all public service corporation property, both realty and personality, at an average statewide assessment ratio determined largely by a study of real estate assessment ratios?

Scope of Study

The study of assessment ratios in Virginia is intended to yield some light as to the equity of Virginia's property tax system, particularly in relation to the utility industry generally. However, as has been noted, the assessment ratio is but half of the taxing process, the other equally important half being the rates of levy applied to assessed values to determine the final tax bill. Further, in this respect, the rates of levy frequently vary between those imposed on real estate and those imposed on personal property. Thus, the classification of utility property into

categories of realty and personality becomes an important problem to which some attention will be directed. In addition, there will be a general review of the assessment practice as it applies to public service corporations.

Finally comes the question of alternative courses of action to be taken in case deficiencies are found to exist in the present system. It should not be expected that this study will disclose all of the weaknesses of property taxation and proceed to correct them therewith; however, it is hoped that any deficiencies which this study does reveal will be noted for further investigation. Further, any alternatives proposed should not be taken as final answers, but as points of departure toward ultimate solutions.

CHAPTER 2

HISTORICAL DEVELOPMENT AND BACKGROUND OF PROPERTY TAXATION

The development of property tax schemes can be traced to the Middle Ages and to the influences exerted on its development by the economic composition of the early feudal estates. The more significant refinements and characteristics of today's modern property tax systems have been, however, largely associated with the development of the American economy and especially with the clarifications of state limitations under the federal Constitution. The rapid rise in this country's population and the increased demand for trade between the states precipitated many problems. States and local communities were in need of more and more funds to carry out their public functions. Further, it was only natural that the localities should attempt to protect their "home grown" businesses. As a result, interstate commerce was subjected to heavy taxation by localities.

Taxation of Interstate Commerce

This taxation of interstate commerce did not proceed without protest by those so engaged in such commerce. Numerous cases arose in which it became evident that state taxation of interstate commerce involved considerations which were not present when the issue related merely to the

police power. In view of these considerations the Cooley rule¹ was not used to any great extent in the state tax cases. Uniformity, therefore, was considered to be of the utmost importance in this area.² However, if granting protection to those engaged in interstate commerce solved the problem of local interference with national matters it created another equally difficult problem. To give interstate commerce full immunity meant that competing, local business would have to pay an undue share of the cost of local government whose benefits interstate commerce enjoyed.

Out of many cases brought into the courts, the general rule evolved that states and localities, under their taxing power, may adopt any method of taxation which they desire as long as it is not in conflict with the federal Constitution. In order to steer the tax vessel to the harbor of constitutionality, safely past the "Scylla of the commerce clause and the Charybdis of due process," the states were forced to rely upon taxation of property, and not taxation of business income obtained through interstate commerce.

¹Cooley v. Board of Port Wardens, 53 U.S. 298, 299 (1851). In this case was developed the "doctrine of concurrent power" in which the states were permitted regulation of commerce concurrently with the federal government except when in conflict with federal regulation.

²The Passenger Cases, 7 Howard 283 (1849); State Freight Tax Case, 15 Wallace 232 (1873).

Unfortunately, the United States Supreme Court has shown a remarkable lack of consistency in interpreting just what was a tax on property and what was a tax on income. It has been held, for example, that the property of companies engaged in interstate commerce may be taxed³ and, further, may be taxed at its value as it is, in its organic relations, and not merely as a series of unrelated items. It is therefore important to note that taxes on such property have been sustained that took account of the augmentation of value from the commerce in which it was engaged.⁴ On the other hand, the United States Supreme Court held a Texas tax, ostensibly one levied on property, to be a tax on income and, therefore, invalid.⁵ The difficulty in distinguishing between the two, of course, is apparent. Since the commercial value of property consists in the expectation of income from it, and since taxes ultimately come out of income, obviously taxes called taxes on property, and those called taxes on income, tend to run into each other in the long run.

A brief examination of certain other important cases provides an insight into the rationale of the United States

³McAhren v. Bradshaw, 113 P. 2d 932, 57 Ariz. 342; Pullman Palace Car Co. v. Pennsylvania, 141 U.S. 18 (1891).

⁴Adams Express Co. v. Ohio State Auditor, 165 U.S. 194 (1897); Adams Express Co. v. Kentucky, 166 U.S. 171 (1896); Fargo v. Hart, 193 U.S. 490 (1904).

⁵Wisconsin & M. Ry. Co. v. Powers, 191 U.S. 379 (1903).

Supreme Court, although the theory evolved is dichotomous. In one such case, Justice Frankfurter, in the majority opinion, held that the commerce clause, even without implementing legislation by Congress, is a limitation upon the taxing power of the states.⁶ This "direct burden" rule would invalidate a tax not because it was discriminatory, or that other states might retaliate with a similar tax, or that it might increase the cost of production, but because there is interference by a state with the freedom of interstate commerce. On the other hand, when a regulatory measure has been called into judgment, the United States Supreme Court has generally followed the Cooley doctrine of "concurrent power." The "concurrent power" doctrine, however, has been limited by a decision which held that states can retard the flow of commerce under their police power to protect the health and safety of their people, but cannot make a similar retardation for economic purposes.⁷ Two more recent cases affirm the more modern view of the United States Supreme Court that "a tax on net income from interstate commerce, as distinguished from a tax on the privilege of engaging in interstate commerce, does not conflict with the commerce clause."⁸ Although taxes on net income

⁶ Freeman v. Hewitt, 329 U.S. 249 (1947).

⁷ H. P. Hood and Sons, Inc. v. DuMond, 336 U.S. 525, 69 S. Ct. 657 (1949).

⁸ Northwestern States Portland Cement Co. v. Minnesota, 358 U.S. 450, 79 S. Ct. 357 (1959); Williams v. Stockham Valves and Fittings, Inc., 358 U.S. 450, 79 S. Ct. 357 (1959).

of local businesses have become increasingly popular, and although recent decisions of the United States Supreme Court have permitted an expansion of the states' power to tax interstate commerce, emphasis has continued to remain upon the property tax as a major source of local revenue.

Property Taxes

The earliest rule applicable to the taxation of property is said to have been expressed in the maxim mobilia sequuntur personam. This rule holds that property be taxed in the owner's domicile, regardless of the location of the property itself. It has been suggested that this rule found its applicability during those times when property consisted mainly of wealth in the form of gold, silver and jewels, and could easily be carried around by the owner or hidden by the owner in locations known only to him.⁹

More recently, however, the rule of lex situs has, in many cases, replaced the old rule. The large increase in the amount and kinds of personal property divorced from direct control of the owners has given rise to this law of the place where the property is kept and used. Generally speaking, the rules which have evolved to the present hold that real property is taxable only where located under the

⁹P. J. Hartman, Taxation of Interstate Commerce (Buffalo, N.Y.: Dennis Co., Inc., 1953), pp. 79-80.

lex situs rule. On the other hand, tangible personal property generally follows the owner under the mobilia sequuntur personam rule, with certain qualifications.

First, where the tangible personal property tax is located permanently outside the domicile of the owner, such property may be taxed in the state of situs because the property obtains the benefits and protection of its laws.¹⁰ Second, the problem arises as to when tangible personal property, used in interstate commerce, acquires a situs in a nondomiciliary state in order to allow that state the power to impose a tax on it. It is generally agreed that a nondomiciliary state can tax the tangible personal property engaged in interstate commerce within it, disregarding the rule of mobilia sequuntur personam; however, such taxation must be based on a fair formula and possess some reasonable relation to the benefits conferred by the taxing state.¹¹ A final consideration is the possibility of double taxation; that is, if the nondomiciliary state can tax tangible personal property, can the owner's state also impose a tax? The general conclusion apparently is that the domiciliary state cannot tax such property if

¹⁰ Union Refrigerator Transit Co. v. Kentucky, 199 U.S. 194; 26 S. Ct. 36, 50 (1905).

¹¹ Fullman Palace Car Co. v. Pennsylvania, 141 U.S. 18 (1891); Ott v. Mississippi Valley Barge Line Co., 336 U.S. 169; 69 S. Ct. 432 (1949); Braniff Airways v. Nebraska State Board of Equalization and Assessment, 348 U.S. 852 (1954).

there exists a permanent situs elsewhere; otherwise, the owner's state can tax under the rule of mobilia sequuntur personam.¹²

Constitutional provisions--Virginia

Section 169 of the Virginia Constitution provides for assessment of real estate and tangible personal property at fair market value. Section 168 of this same Constitution provides that all taxes, regardless of who administers or levies them, "shall be uniform upon the same class of subjects within the territorial limits of the authority levying the tax. . . ." From these constitutional provisions there arise two important questions. First, can the property of public service corporations be classified separately from other types of property? Second, if property of public service corporations can be segregated, must the state assessing agency adhere strictly to the provisions of Section 169 or must it assess public service corporation property in the same manner as other property is assessed, whether or not the constitutional provisions are being followed?

In considering these questions, some general and historical analysis is necessary, the uniformity provisions being afforded attention first. It is generally agreed

¹²Northwest Airlines v. Minnesota, 323 U.S. 809 (1944).

that classification by legislative action of property into reasonable and natural classifications violates neither the Fourteenth Amendment to the federal Constitution nor the equality and uniformity clauses of many state constitutions. This power of a state apparently is without dispute, and allows such classifications to be made ". . . with respect to the subjects of taxation generally, the kinds of property to be taxed, the rates to be levied or the amounts to be raised, or the methods of assessment, valuation, and collection. Granting the power of a state to make classifications in tax matters, it has been said, we must then grant the right to select the differences upon which the classification shall be based."¹³

In addition to this power, it seems further that reasonable discriminations are permissible and, in fact, probably intended as a direct result of segregation. At least it is argued that classification does not prevent or bar unequal tax treatment between the various types of property so classified.¹⁴ Not only have state courts consistently held this position, but also the United States Supreme Court has maintained a position which affords little protection to property owners so discriminated

¹³51 Am. Jur., Section 173, pp. 230-231.

¹⁴City of Richmond v. Commonwealth of Virginia, Ex Rel., Record Number 3389, Opinion of Justice Abram P. Staples, from the State Corporation Commission of Virginia.

against. In one case before the United States Supreme Court, involving a tax which, through exemptions, discriminated against out-of-state competitors, it was held that

... the equal protection clause of the Fourteenth Amendment does not prevent a state from classifying businesses for taxation or impose any iron rule of equality. Some occupations may be taxed though others are not. Some may be taxed at one rate, others at a different rate. Classification is not discrimination. It is enough that those in the same class are treated with equality. That is true here.¹⁵

The equal protection clause, in relation to taxation, requires that states treat parties among whom there is no substantial distinction in a reasonably uniform manner.¹⁶ By the same token, inequalities that result incidentally in the application of a tax law which is not systematically arbitrary are not sufficient, it has been held, to make the tax unconstitutional.¹⁷ The United States Supreme Court has gone even further when it expressed the opinion that neither does the fact that a statute favors a certain class render it arbitrary if the differentiation is based upon a

¹⁵ Caskey Baking Co. v. Commonwealth of Virginia, 313 U.S. 117, 121 (1941).

¹⁶ U.S. v. Burnison, 339 U.S. 87 (1950); Stewart Dry Goods Co. v. Lewis, 294 U.S. 550 (1935); Hopkins v. Southern California Telephone Co., 275 U.S. 393, 403 (1928).

¹⁷ Maxwell v. Bugbee, 250 U.S. 525 (1919), (inheritance tax); Keeney v. New York, 222 U.S. 525 (1912), (transfer tax on property); Beers v. Glynn, 211 U.S. 477 (1909) (inheritance tax).

reasonable distinction or difference in state policy.¹⁸

Thus, in effect, the United States Supreme Court has held that a statute which has the effect of encouraging needed and useful industries to locate within a state by exempting them, but not others, from its taxes is not arbitrary and does not violate the equal protection clause.¹⁹

On the other hand, arbitrary and unequal taxation is proscribed by both the federal and state constitutions.²⁰ Where the state constitution contains a requirement that the general rule of taxation on property shall be uniformity, the courts have so interpreted it as requiring all property to be taxed as one class.²¹ However, where

¹⁸ Asbury Hospital v. Cass County, 326 U.S. 207 (1945) (discrimination between classes of farm owners presumed relevant to legislative purpose); Stebbins v. Riley, 268 U.S. 137 (1925) (tax differentiation between testamentary disposition and inheritance permitted); American Sugar Refining Co. v. Louisiana, 179 U.S. 89 (1900) (discrimination between refining company and farmers who refined their own sugar allowed).

¹⁹ Williams v. Mayor of Baltimore, 289 U.S. 36 (1933); Ohio Oil Co. v. Conway, 281 U.S. 146 (1930); Bell's Gap R.R. v. Pennsylvania, 134 U.S. 232 (1890); Colgate v. Harvey, 296 U.S. 404, 439 (1935).

²⁰ Cumberland Coal Co. v. Board of Revision, 284 U.S. 236 (1931); Sioux City Bridge Co. v. Dakota County, 260 U.S. 441 (1923).

²¹ Chicago & N.W. Ry. v. State, 128 Wis. 553, 108 N.W. 557 (1906); First National Bank v. Holmes, 246 Ill. 362, 92 N.E. 893 (1910); Opinion of the Justices, 208 Mass. 616, 94 N.E. 1043 (1911); 1 Cooley, Taxation (4th Ed., 1924), pp. 292, 298.

constitutional provisions merely impose a requirement of uniformity upon the same class of subjects, as in the case in Virginia under Section 168 of the Constitution, statutory classification of property is impliedly authorized and, apparently, reasonable differences in assessments between classes are allowable. A typical decision was handed down by a Minnesota court in 1938 when it stated that ". . . unless a discrimination is manifestly arbitrary and unreasonable it will be sustained. . . . Any classification is permissible which has a reasonable relation to some permitted end of government."²²

In a decision of the United States Supreme Court, involving the classification of railroad property for taxation, cited and quoted at length by Justice Abram P. Staples in City of Richmond v. Commonwealth of Virginia Ex Rel., supra, it was held that

. . . the states may classify property for taxation; may set up different modes of assessment, valuation, and collection; may tax some kinds of property at higher rates than others; and in making all these differentiations may treat railroads and other utilities with that separateness which their distinctive characteristics and functions in society make appropriate--these are among the commonplaces of taxation and of constitutional law.²³

²² State ex rel. Equity Farms, Inc. v. Hubbard, 203 Minn. 111 (1938).

²³ Nashville C. & St. L. Ry. v. Browning, 310 U.S. 362, 60 S. Ct. 968 (1940).

Constitutional and statutory development
in Virginia

An examination of the development of the constitutional and statutory provisions relating to the taxation of public service corporations should provide an insight to the development of property taxation in Virginia. The statutes relating to the assessment of all public service corporation properties follow the same general pattern as do those governing railroad property assessment, and since public service corporation assessment practice today was developed from the system used for railroad property assessment, attention is first turned to the development of railroad assessment practice.²⁴

Originally, railroads assessed their own property for purposes of state taxation, applied the existing levy rate, and rendered payment directly to the state treasury. This procedure was provided for under Virginia law²⁵ and was upheld by the courts, denying the localities any power to make assessments and, consequently, to levy taxes against railroad property.²⁶

²⁴Based upon data in City of Richmond v. Commonwealth of Virginia, *supra*.

²⁵Acts of 1870-71, Commonwealth of Virginia, p. 93.

²⁶Virginia Tennessee R.R. Co. v. Washington County, 30 Gratt 471 (1871).

It was not long, however, until the legislature, under pressure from the taxing districts, enacted legislation which permitted a local levy on railroad property located therein.²⁷ Local tax collectors were barred, however, from making the assessment themselves, being required to use the same assessment as that made by the state and, further, being limited to the imposition of a rate of levy uniform with that imposed on other property. Even at this early date, classification was generally accepted; however, it appears that such separate classification of railroad property was made not for the purpose of discrimination, but to achieve equity between the taxation of railroad property and all other property. To attempt to place a value on railroad property located in one taxing district, without consideration of its operating whole, would be next to impossible. As a result, the General Assembly of Virginia specifically charged a central agency, the Board of Public Works, with the assessment responsibility, such assessments to be certified to the taxing districts for application of uniform local rates of levy.²⁸

With the adoption of the Virginia Constitution of 1902, the system of taxation of both railroad and other public

²⁷Acts of 1879-80, Chapter 106, Commonwealth of Virginia, p. 82.

²⁸Acts of 1897-98, Chapter 76, Commonwealth of Virginia, p. 78.

service corporation property was further developed as a separate procedure, both as to ascertaining taxable values and as to taxation. The effect of this system has been to standardize the assessments of all public service corporation property; however, with each taxing district assessing all other property, it must have been obvious, even to the engineers of this device, that local assessment ratios would equate with utility assessments chiefly by accident. Justice Staples, on this subject, had the following to say in the opinion rendered in City of Richmond v. Commonwealth of Virginia, *supra*:

In view of this necessary result with respect to the inequality of the tax burden on their respective properties which would fall upon railroads and other property owners, it cannot be doubted that the framers of the Constitution of 1902 intended to and did place the real and tangible personal property of railroads in an entirely separate tax classification. For many years prior to the adoption of the 1902 Constitution, it had been settled by the decisions of the Supreme Court of the United States that the equal protection clause of the Fourteenth Amendment required uniformity of the tax burden only upon persons and properties of the same class, and that it lay within the province of the state to classify its subjects of taxation, imposing on one kind of property one burden of taxation, and on another kind a lesser or greater burden.²⁹

²⁹City of Richmond v. Commonwealth of Virginia, *supra*.
(*Italics added.*)

Further on, this same opinion asserts that "since the uniformity provisions of Section 168 (of the Virginia Constitution) could not possibly be applied to such conditions, it follows that the framers of the Constitution considered railroad property as constituting a separate and distinct class and not within the uniformity provisions."³⁰

There has been in the past, without resolution to date, considerable confusion as to the exact meaning of the uniformity provisions. Justice Staples, for example, from the passage quoted above, is of the opinion that separate classification is permissible and was intended by the framers of the Constitution, an opinion to which there is little disagreement; however, it is to be questioned whether classification for purposes of making assessments of property values is sufficient, per se, to assure uniformity in the burden of taxation. Since the burden of taxation is measured by application of rates of taxation to assessed valuations, uniformity of the tax burden upon persons and properties of the same class would seem to mean uniformity in both assessments and levy rates.

As shall be observed, this complete "constitutional uniformity" does not exist in Virginia. On the one hand, the property of public service corporations and nonutility property owners, when located within the same taxing

³⁰ Ibid.

district, is subject to uniform rates of taxation applied to divergent assessed valuations. On the other hand, two utilities serving a wide area, although assessed uniformly, are subject to divergent levy rates between counties and cities. This is similarly the case for one utility serving a number of taxing districts.

Property tax revenues--general

As a per cent of combined tax revenues of state and local governments, the property tax has been declining in importance over the years. This fact is illustrated in Table 2.

The combined state and local property taxes rose from \$4,730 million to \$12,864 million in the thirty years between 1927 and 1957; however, expressed as a percentage of total tax revenue, the property tax declined from 78 per cent, in 1927, to 45 per cent, in 1957. This decline in the relative importance of the property tax is more significant in respect to state tax revenues, however, and reflects the gradual withdrawal by many states from the general property tax field in favor of other taxing devices such as the sales tax and the income tax. The property tax is still the major source of local tax revenue, however, 86.7 per cent of all local government tax revenue having been derived from this source, in 1957. Although Table 2 shows a decline from 97.3 per cent, in 1927, to 86.7 per cent, in 1957, in the percentage reliance of localities

TABLE 2

STATE AND LOCAL TAX REVENUE, AND PROPERTY TAXES AS A PERCENTAGE
OF TOTAL TAX REVENUE, UNITED STATES, SELECTED YEARS
(In millions of dollars)

Year	1927	1934	1940	1946	1950	1957
Combined state and local tax revenue						
a. Total	\$6,087	\$5,912	\$7,810	\$10,094	\$15,914	\$28,817
b. Property taxes	4,730	4,076	4,430	4,986	7,349	12,864
State tax revenue						
a. Total	1,608	1,979	3,313	4,937	7,930	14,531
b. Property taxes	370	273	260	249	307	479
Local tax revenue						
a. Total	4,479	3,933	4,497	5,157	7,984	14,286
b. Property taxes	4,360	3,803	4,170	4,737	7,042	12,385
Property taxes as a percentage of total tax revenue						
a. State and local	77.7%	68.9%	56.7%	49.4%	46.2%	44.6%
b. State	23.0	13.8	7.8	5.0	3.9	3.3
c. Local	97.3	96.7	92.7	91.9	88.2	86.7

Source: U.S. Bureau of the Census, Historical Summary of Governmental Finances in the United States, 1959. (1957 Census of Governments, Vol. IV, No. 3), tables 4, 5 and 6.

nationally on the property tax for local revenues, the decline appears to be of minor significance. However, if one considers the tremendous increase in revenues from other sources, notably the individual income tax, the sales and use taxes, and federal supplements, it is seen that local governments are depending even less on the property tax than the foregoing figures would appear to indicate. As shown in Table 3, this fact has proved valid during the period of rapidly expanding revenue needs since World War II.

While total local revenues were increasing 209 per cent, property taxes increased only 161 per cent. This lag in the increase in property tax revenues resulted in that source declining from 57.6 per cent of total revenues in 1946 to 48.7 per cent in 1957. Thus, although property taxes have declined in importance only moderately in relation to total local taxes, the decline is more pronounced when viewed in relation to total local revenues. As indicated in Table 3 property taxes are being supplemented by an increased reliance by local governments upon the other sources of revenue, in particular state and federal supplements.

Although the preceding analyses are enlightening as to the role of the property tax nationally, they do not reveal either basic differences between states or, more important and relevant to this study, the actual situation which is confronted in Virginia by the taxpayers of that state, including in particular the public service corporations

TABLE 3

SOURCES OF REVENUE FOR LOCALITIES,
UNITED STATES, 1946 AND 1957
(In millions of dollars)

	1946		1957		Percentage Increase 1946 to 1957
	Amount	Per Cent of total	Amount	Per Cent of total	
Total local revenues	\$8,227	100.0%	\$25,406	100.0%	209%
Intergovernmental revenue:					
From federal government	53	0.6	343	1.4	547
From state governments	2,092	25.4	7,196	28.3	244
Local sources:					
Property taxes	4,737	57.6	12,385	48.7	161
Income taxes	33	0.4	191	0.8	479
Sales and gross receipts taxes	183	2.2	1,031	4.1	463
Other, including licenses	204	2.5	679	2.7	233
Charges and miscellan- eous	925	11.2	3,580	14.1	287

Source: U.S. Bureau of the Census, Historical Summary of Governmental Finances in the United States, 1959. (1957 Census of Governments, Vol. IV, No. 3), Table 6.

operating in and serving that state. Table 4 is more revealing in this respect. The various states, including the District of Columbia, have been broken down into three groups. Group 1 consists of those states which place heavy reliance (over 60 per cent) on the property tax as a source of local revenue. Group 2 includes those states which fall into the middle range of reliance, 40 to 60 per cent, and Group 3 includes the remaining states whose emphasis upon the property tax is less and whose revenue from this source is less than 40 per cent. It should be noted that only three states, Nebraska, New Hampshire and New Jersey, placed sufficient importance upon the property tax as a source of local revenue to obtain greater than 60 per cent of their local tax revenues from this source.

As shown in Group 3 in Table 4, there were eighteen states and the District of Columbia which had relegated the property tax to a role of only minor significance. It is noteworthy that this group includes most of the southern and southwestern states, a fact which reflects the predominant agrarian economy of these states. Explanations of this relatively unimportant position of the property tax in these states can only be conjectural; however, in each case there is at least one apparent explanation. In Florida, for example, the subsidizing of home owners by property tax exemptions has brought a material narrowing of the property tax base. West Virginia, among others, has set a legal limitation on property tax rates. Many counties in Virginia

TABLE 4

PROPERTY TAX REVENUE AS A PERCENTAGE OF TOTAL STATE AND LOCAL TAX REVENUE, CLASSIFIED BY STATES, OTHER DATA, 1957

	Property Tax Revenue Percentage of all state and local taxes	Per \$1,000 of personal capita income	State Rank	Per \$1,000 of personal income	State Rank
Group 1 (over 60%)					
1. Nebraska	70.0%	\$ 97.95	53.31	5	5
2. New Jersey	64.0	112.92	45.02	2	15
3. New Hampshire	62.8	95.42	51.34	11	7
Group 2 (40% to 60%)					
4. Montana	58.3	109.49	58.17	5	3
5. South Dakota	58.2	94.66	61.02	13	2
6. Kansas	58.0	101.81	56.01	7	4
7. Massachusetts	54.9	122.28	51.95	1	6
8. Indiana	52.8	77.82	38.50	24	23
9. North Dakota	51.8	88.25	61.60	16	1
10. Wisconsin	51.8	95.05	49.49	12	9
11. Minnesota	51.8	93.62	50.55	14	8
12. Illinois	51.7	92.35	37.99	15	25
13. Wyoming	51.4	98.33	48.40	8	10
14. Colorado	50.8	95.97	47.80	10	12
15. Rhode Island	50.4	76.50	38.23	25	24
16. Idaho	50.2	78.07	48.28	23	11
17. Connecticut	50.0	101.85	36.38	6	26
18. Maine	50.0	74.91	44.86	26	16
19. Iowa	48.8	85.94	47.30	17	13
20. Ohio	48.0	73.20	32.48	27	29

TABLE 4 (continued)

	Property Tax Revenue Percentage of all state and local taxes	Per capita	Per \$1,000 of personal income	State Rank
21. New York	47.7%	\$109.94	\$43.35	4 19
22. California	47.2	112.67	44.51	3 17
23. Arizona	46.4	78.74	42.70	22 20
24. Texas	46.2	63.33	35.51	31 27
25. Michigan	46.1	83.60	38.56	19 22
26. Vermont	45.0	78.85	46.60	21 14
27. Missouri	44.4	57.98	29.76	32 33
28. Utah	43.8	71.33	41.55	28 21
29. Maryland	42.5	67.73	31.41	29 31
30. Oregon	42.4	85.08	43.81	18 18
Group 3 (under 40%)				
31. District of Columbia	36.8	64.35	25.26	38
32. Kentucky	36.3	38.77	28.28	35
33. Nevada	36.1	83.00	33.61	20 28
34. Florida	35.4	56.12	31.40	33 32
35. Pennsylvania	33.4	53.85	25.42	35 37
36. VIRGINIA	31.1	39.88	24.23	37 41
37. Oklahoma	30.4	46.62	28.54	36
38. Washington	29.6	55.84	26.27	34 36
39. Georgia	29.0	36.13	25.20	40 39
40. Tennessee	28.9	33.93	24.38	42 40
41. Mississippi	27.5	29.75	20.78	45 30
42. North Carolina	26.8	30.15	22.76	43

TABLE 4 (continued)

	Property Tax Revenue Percentage of all state and local taxes	Per capita	Per personal income	Per capita	Per personal income	Per capita	Per personal income	State Rank
43.	Arkansas	26.5%	\$26.55	\$23.22	47	42	42	
44.	West Virginia	25.4	28.46	18.19	46	47	47	
45.	Delaware	23.9	32.44	11.73	43	49	49	
46.	New Mexico	23.4	36.84	21.41	39	45	45	
47.	South Carolina	23.0	23.89	20.23	48	46	46	
48.	Louisiana	21.8	35.39	22.59	41	44	44	
49.	Alabama	20.2	20.45	15.50	49	48	48	

Source: U.S. Bureau of the Census, *Compendium of Government Finances* (Washington: U.S. Government Printing Office, 1959), 194 pp. (1957 Census of Governments, Vol. III, No. 5.)

have generally placed a low ceiling on the availability of property taxes through the practice of assessing property at small fractions of full value. Nevada, where gambling is legal, has an alternative source of revenue not readily available under existing laws to many other states.

Washington State has taken over most of the responsibility for administering or financing the local administration of certain commonly local functions, such as schools and welfare, using for this purpose revenue from sources other than property taxation.

It should also be noted that, on a per capita basis, with only minor exceptions, the rank of the state is similar to that obtained when comparing local property taxes with total taxes. The exceptions, taking Massachusetts as an example, show that where the per capita tax is exceptionally high, so also is per capita income. Per capita figures are not, however, a very good measure of the comparative property tax burden. For example, though New Jersey, California and New York rank high in per capita taxes, they rank 15th, 17th and 19th respectively in property taxes per \$1,000 of personal income. On the other hand, these data show how a combination of moderate per capita income and relatively great reliance on the property tax creates an extremely high burden of taxation per \$1,000 of personal income. North and South Dakota are cases in point.

That the property tax accounted for 86.7 per cent of all local tax revenues in the United States in 1957 is an

indication that other taxes have not become a material factor in local tax systems nationally. Though locally administered nonproperty taxes are a substantial source of revenue in some cities and of lesser importance in many others, they are not a satisfactory substitute for local governments generally. The more productive nonproperty taxes are not well adapted for local administration; however, it might well be possible to permit the localities to participate in state-administered tax schemes as a supplement to the property tax.

Property Tax Revenues in Virginia

Virginia is not distinctive in the relative decline of the importance of the property tax as the chief source of revenue to the localities. Table 5 illustrates this point. From it, it is observed that Virginia's counties continue to rely chiefly upon property taxes as their largest source of revenue; however, it is noted that, as a percentage of total local revenues, property taxes have declined in importance, dropping from 47.00 per cent in 1943 to 42.72 per cent some fifteen years later. It is also noteworthy that all sources of revenue have increased more rapidly in Virginia than the national averages; however, even in this case property taxes have increased to a lesser degree than have the remaining sources of revenue. This indicates that in Virginia as well as nationally property taxes are being supplemented by an increased reliance of local

TABLE 5
SOURCES OF REVENUE FOR VIRGINIA COUNTIES, 1943 AND 1958
(In millions of dollars)

Type of Revenue	1943 Amount	1943 Per Cent	1958 Amount	1958 Per Cent	Per Cent Increase
Property taxes	\$16,546	47.00%	\$ 76,825	42.72%	464.3%
Service charges	814	2.31	7,339	4.08	901.6
State supplements ^a	14,196	40.36	69,759	38.79	491.4
Federal supplements	1,575	4.48	11,964	6.66	759.6
Other revenues ^b	2,040	5.85	13,929	7.75	682.8
Total	\$35,171	100.00%	\$179,816	100.00%	

Sources: Report of Auditor of Public Accounts on Comparative Cost of Local Government, Year Ended June 30, 1943, Commonwealth of Virginia. Report of Auditor of Public Accounts on Comparative Cost of Local Government, Year Ended June 30, 1958, Commonwealth of Virginia.

^aState supplements include certain federal welfare payments.

^bOther revenues include dog licenses and miscellaneous receipts.

governments upon the other sources of revenue, in particular state and federal supplements and increased service charges.

Summary

In this chapter some historical background of the property tax was presented, including the taxation of interstate commerce and the development of rules applicable to the taxation of property. Also considered were the constitutional provisions for the taxation of property in Virginia. It was noted that the constitutional and statutory development of the ad valorem tax system in Virginia followed the same general pattern as the development of taxes on railroad property. These constitutional provisions, as they have developed, have never been precisely defined in all cases. In particular, the provision of the Virginia Constitution requiring uniformity in taxation does not spell out whether uniformity in assessment means uniformity between all property or between classes of property owners.

Background data relative to property tax revenues were also analyzed and it was found that nationally the property tax has declined in importance over the years, especially as a source of state revenues. Although it has declined somewhat as a source of local revenues, it was noted that the property tax continues to provide a substantial percentage of total local revenues. An analysis of property tax revenues in Virginia revealed that this tax scheme has similarly declined in relative importance as a source of

local revenues, being replaced in large part by state and federal supplements and non-tax revenues. However, Virginia's localities continue to rely on the property tax as their chief source of revenue.

Because the property tax does continue to play such an important role in local government revenues, the problems of equity in the administration of this tax system continue to have considerable significance. It is to one administrative aspect that this study now turns--the assessment function.

CHAPTER 3

ASSESSMENT ADMINISTRATION

The assessment of property on some equitable basis has been the most difficult problem facing the tax assessor throughout the long history of this type of taxation. As long ago as 1692, a petition to the Governor of the Colonial Assembly of the Colony of New York urged:

... that there may be a certain method for the equal and proportionable assessing of subsidies, We doe pray his Excell. would appoint Commissioners in each respective County for the making of an Estimate of their Estates, that for the future there may not be such uncertainties.¹

That the basis for such complaints exists even today is evidenced by recent findings and reports of state tax commissions throughout the country. For example, the final report of the State Tax Study Commission to the Governor of West Virginia states that "West Virginia's problem is not so much excessive taxes, as it is extreme unevenness of burdens."² The 1956 Report of the Governor's

¹Frederick D. Bidwell, Taxation in New York State Albany: J. B. Lyon Company, 1918), pp. 12-13.

²West Virginia State Tax Study Commission, West Virginia Taxes, Charleston, West Virginia, November, 1960, p. 51.

Minnesota Tax Study Committee states that in ". . . examining Minnesota's tax problems, the Research Staff and the Committee itself found the property tax to be the most deficient major element of the Minnesota tax system not only in terms of its inequity in structure and enforcement, but also in its discriminatory impact on industry and agriculture."³

This same problem was also recognized in New Jersey, as indicated by the statement in a 1953 Report of the New Jersey Commission on State Tax Policy that the:

. . . study of the general property tax touches upon the most sensitive issues of state and local government. It was undertaken because of a long-held belief that property valuations and assessments were marred by the grossest inequities. The study demonstrates⁴ and confirms this belief. . . .

That uniformity in the assessment practice is essential to the health of the nation's economy is a fact which occasionally goes by unnoticed in the efforts of many tax assessors to obtain revenues. As stated by one authority, equity in the assessment practice

. . . is essential to the continued success of our democratic system of government. Local government, the bulwark of our democratic system, cannot be considered

³Report of the Governor's Minnesota Tax Study Committee, State of Minnesota (St. Paul, 1955), p. 568.

⁴New Jersey Commission on State Tax Policy, Sixth Report . . . The General Property Tax in New Jersey: A Century of Inequities (Trenton, 1953), p. ix.

on a sound financial basis unless the cost is equitably distributed among its taxpayers. Uniformity and equality are also essential in an economic system of free enterprise and fair competition. The tax cost is a substantial item in the overhead of commercial and industrial organizations. If the cost is not equitably distributed, it disturbs the economic structure of our society. If a business concern could count on its assessment and its competitors' assessments always being on a sound and equal basis, it could better plan a sound future program.⁵

Making the Assessment

The first problem confronting the local assessor is one of locating taxable property and adding it to the tax rolls. Some pieces of property escape the tax rolls for some period of time due to questions of situs and jurisdiction, failure of the property owners to disclose the existence of the property, or the failure of the assessor to "find" such property through ignorance, incompetency or error.

Once property is located it is the assessors' job to determine its value, according to a uniform standard, so that each taxpayer contributes to the cost of government in proportion to the value of his property, this being the essence of ad valorem taxation.

⁵Clifford Goes, "Appraisals," Proceedings of the Forty-First Annual Conference on Taxation (Sacramento, Calif: National Tax Association, 1948), p. 149.

This is no easy task, however, since there is little agreement as to which standard of value should be applied by the assessor. The statutory and constitutional provisions of most states provide for the assessment of property at some percentage, most usually 100 per cent, of "full" value, "fair" value, "fair market" value, "fair cash" value, "cash" value or some other varying term which is lacking in both uniformity and clarity between the states.

Section 169 of the Virginia Constitution provides for assessment of real estate and tangible personal property at its full fair market value. This leaves unsolved the problem of the determination of fair market value.⁶ For some types of property the determination of fair market value is relatively simple conceptually if one accepts the general definition that fair market value is

. . . the probable price at which it would have been sold, had it been sold, on the taxing date at a sale between a willing buyer able but not compelled to buy, and a willing seller able but not compelled to sell, if both buyer and seller had been fully conversant with the property and with current public opinion concerning prices in general.⁷

Even though sales prices of parcels of property can be objectively determined in many cases, there are limitations

⁶The determination of fair market value of public service corporation property is taken up in Chapter 5.

⁷Philip H. Cornick, in A. E. Buck and Others, Municipal Finance (New York: Macmillan Company, 1926), p. 313.

to its exclusive use in establishing taxable property values. First, it is necessary to eliminate from consideration sales of property which might not be "arms length" in nature, such as transfers between relations. Second, as is frequently the case, economic conditions might exist which affect the degree of willingness to sell or buy. A recessionary period such as the 1960-1961 downturn in economic activity, for example, may well encourage some owners of property, unable to meet mortgage payments, to sell on terms less favorable than they might normally sell. Further, not only is the number of sales of property in a given period of time a relatively small percentage of the total property available, but also it is questionable that the properties actually sold are truly representative of all types, ages, and conditions of such other properties in the area. As a result, sales price data must be supplemented by other analyses in order to arrive at a "fair" market value which may or may not be the same as market price.

Though many assessors copy the preceding year's assessment roll to satisfy their responsibility for the current year's assessment, making little real effort to achieve uniformity or equity, their excuses often are plausible. The assessment of property, which exists in a multiplicity of kinds of land and improvements and for a legion of purposes, is a formidable task even for the most experienced and objective assessor. Although the job of assessor is

perhaps one of the most responsible in government, most governmental units do not pay a salary sufficiently high to attract the more qualified individuals to seek the office. In many cases, the local government's budget is such that sufficient funds are not available because of the small size of the taxing district. In Virginia, the Department of Taxation has a team of expert assessors who will lend their assistance to the assessors in the localities; however, there is no evidence that the use of this service is widespread.

In addition to the possible lack of competency on the part of the local assessor, other obstacles exist to impede assessment practice. One of the foremost of these obstacles is the scarcity of adequate funds to properly staff the assessment function. Closely related is the matter of time. Without adequate staff, regardless of the qualifications of the staff already on the job, it is impossible to devote much time to the determination of a fair value on each and every parcel of property. The treasurer of one city, for example, states that if the number of working hours per year devoted to the assessing function were divided by the total number of parcels of property under the jurisdiction of his office, the average time allowable for the assessment of each piece of property would be approximately thirty seconds.⁸

⁸Personal interview with Johnny H. Johnson, Treasurer, City of Roanoke, Virginia, July 14, 1960.

What, then, can the assessor do? Whether the assessor meets his responsibility by guessing, by copying last year's assessment roll, or by applying objective appraisal methods depends largely on his training and the kind of organization and assessing aids he has at his disposal. It is further dependent on the particular problems with which he is faced. For example, in the case of certain classes of real estate, such as industrial property, sales may be both infrequent and unrepresentative of market value. Frequently, improvements have been made to property for which the market price depends on either how well these improvements serve their intended purposes or how well they can be adapted to other uses for which there is some demand. Illustrations of these problem situations would be a moat around an eccentric's house, a bomb shelter of unknown adequacy, or a railroad station where service has been curtailed or abandoned. In this respect, one writer reveals that older houses present a problem in that they

... are frequently the materialized dreams of their wealthy owner-builders (nightmares, however, for the assessor), which range from miniature replicas of King Arthur's castle at Camelot to Brobdingnagian monstrosities combining features of Gothic, French Renaissance, Tudor and Byzantine architecture. . . . Monumental residences are hardly more disposable than would be an elaborate tombstone inscribed with the name and crowned with the family crest of the owner-builder.⁹

⁹Albert E. Champney, "Obsolete Mansions," Assessors' News Letter (National Association of Assessing Officers, XX, No. 7, July, 1954), 50-51.

Few people question the magnitude of the assessing function itself; however, few people seem to be aware of the complexity of the processes whereby property is assessed. In the assessing of personal property, for example, the assessment function ranges from being no problem at all in those states which have exempted personal property from ad valorem taxation, to being a problem of great futility in those states which still attempt to tax kinds of personal property that do not readily lend themselves to assessment. In the assessing of real estate, which comprises the largest base in any ad valorem tax system, no few problems are encountered. Land itself is of different kinds, improvements are of varying effectiveness and type, and both land and improvements are devoted to a multitude of uses. It is the duty of the assessor to take cognizance of these elusive factors in determining market value.

Most assessing agencies are aware that "fair property taxation is possible only with fair assessments,"¹⁰ and are making efforts to stay abreast of changing conditions. It is interesting to note that such efforts made by one state brought to light the following conditions:

1. Many property owners have continued to pay taxes on a vacant lot years after constructing a home or building on the lot.

¹⁰Guide for West Virginia Assessors, Charleston, West Virginia, January 1, 1958, p. 54.

2. Many properties, commercial and income, are classified as residential and paying half the tax rate that similar properties are paying.
3. Many property owners paying taxes on a value based on the property before the levy limitations law was enacted. In other words, their property valuation has remained undisturbed for over twenty-five years.
4. Many properties built in the last ten years carry high assessed values based on the inflated cost of labor and material, therefore have no relationship to the values placed on properties prior to 1930.¹¹

The problem with which assessors are generally faced center mainly in unequal assessments and under-assessments. Though complete equality of assessment is doubtful of achievement, even with the advanced scientific tools of the progressive assessor, reasonable approximations of equality are certainly feasible. Under-assessment, or assessing at some fraction of the legal requirement, presents certain difficulties of itself. Each of these problems of assessment administration will be given some consideration.

Unequal Assessment

All states require uniformity of assessment, irrespective of whether property is assessed at full value or some fraction of full value. As long as all taxable property within a given taxing district is assessed at the

¹¹Ibid.

same ratio to market value, it may be stated, with certain qualifications, that there is equality of assessment. Within one taxing district, however, if one piece of property is assessed at 40 per cent of full value, as are public service corporations in Virginia, and another piece of property substantially the same is assessed at only 8.5 per cent, the bias in favor of the latter is immediately evident.

Though it is possible to correct the lack of equality of assessments within one taxing district in a state there may remain inequality between taxing districts. This, too, creates certain problems. For example, and of paramount importance in this thesis, many states assess the property of certain kinds of property, notably public service corporation property, and certify their assessments to the localities for application of local tax rates. Frequently, however, these state assessing bodies cannot or do not adjust these assessed values to the widely varying levels of local assessments. Often the local assessment ratios are used for purposes of allocation of state aid, as in the case in Virginia.¹² Virginia, as many states do, limits the borrowing power of the localities to a fixed percentage of local assessed valuations.¹³ Thus, because of varying

¹²Virginia is still using 1950 assessment ratios for this purpose.

¹³Only the cities in Virginia are so limited.

assessment ratios, the various local governments are limited unevenly in the use of their fiscal resources. These considerations help to explain why "it is essential that the state law provide a uniform standard of assessment for all taxing districts in the state, together with adequate administrative means for enforcing the use of the common standard."¹⁴

Under-Assessment

In some states fractional assessment is provided for by law¹⁵ but the majority of the states seem to contemplate assessment at full value. However, investigation of the assessment practice of the various states reveals that no state actually meets the requirement of assessment at a full 100 per cent of full value. This situation of legal, or illegal, under-assessment raises three fundamental questions. First, why has assessment administration failed to comply with the law? Second, in what ways is under-assessment deleterious to local government? Third, what are the relative advantages of assessing at 100 per cent of full value, or of assessing at some fraction of full value?

¹⁴A. E. Buck, et al., Municipal Finance (New York: Macmillan Co., 1926), p. 310.

¹⁵Alabama, 60 per cent; Arkansas, 18 to 20 per cent; Indiana, 33 1/3 per cent; Iowa, 60 per cent; Nebraska, 35 per cent; Oklahoma, 35 per cent; South Dakota, 60 per cent; Utah, 40 per cent; Washington, 50 per cent; Connecticut and Oregon, option of county assessor; Pennsylvania, county option not to exceed 75 per cent.

Failure to comply with the law

Historically, one of the major reasons for the failure of certain counties and cities to comply with a law requiring assessment at 100 per cent of full value has been the policy of protecting the local citizens from paying either an unfair share of state taxes or perhaps even a fair share of state taxes. With more and more states withdrawing from property taxation as a source of revenue, leaving this source to the localities, the impetus for lower assessments on local property for this reason no longer exists; however, the practice in many cases seems entrenched. Further, some states apportion school aid and other forms of assistance to their poorer localities in greater proportions per capita than to the more well-to-do localities, and one of the measures of "poorness" is frequently assessed valuation. This practice would naturally encourage assessments at something less than the legal minimum. Also, many localities purposely retain low assessment ratios in order to appear more attractive to potential industries who might relocate or expand in that area. Unfortunately, many localities fail to realize that firms generally tend to consider the fairness and stability of the local tax structure as well as the short-run benefits which might temporarily accrue to them.

There are a few other possible causes of assessment at less than the legal minimum. First, it is entirely possible that influential property owners, in some cases,

bring pressure to bear on local officials to concentrate their revenue-raising efforts in some direction other than the property tax. Just how this is accomplished and to what extent it is successful is open to debate; however, it is reasonable to expect that some assessors can be so influenced, particularly when the assessing function is conducted by an elected official. Second, the assessment of property at less than the required minimum may tend to make the property owner in general feel as though he were "getting a bargain" regardless of the rate of taxation applied to his assessed valuation. Thus, as long as the taxpayer thinks he is "getting away with something," this may tend to make the assessing and collection function considerably easier for the local officials. Finally, under-assessment can either obscure unequal assessments or make protests less likely. Where the state law requires assessment at 100 per cent of full value, and one taxpayer is assessed at only 50 per cent, he is not only less likely to know that he is unequally treated, even if other taxpayers are assessed at only 10 per cent, because of his desire to keep his "bargain" a secret, but also he is less likely to protest since he knows his assessment is less than that required by law. As expressed by one writer on the subject, "Historically, the full-value law has been

used by some escape-minded assessors as a convenient method of turning aside complaints of inequity."¹⁶

Effects of under-assessment on local government

One of the most serious effects of local assessment practice is the exercise by the assessor of legislative powers not intended for him. In Florida, for example, the legislature has provided a homestead exemption of \$5,000, presumably, according to the Florida Constitution, an exemption of the first \$5,000 of full value of real estate. If one local assessor decides to assess local property at 10 per cent of full value, he is in effect, multiplying the legislative intent by ten.

As mentioned earlier, state aid to localities is frequently measured by assessed valuations. Therefore, local manipulation of the assessment ratio results in erratic deviations from the intent of state policy in the distribution of state funds. Further, local debt is often restricted to some percentage of assessed valuation, as is the case of the cities in Virginia, and local tax rates are often limited by state law, in consideration of what the state considers an acceptable assessment ratio, as is the

¹⁶ Leslie E. Carbert, "Full-Value Assessment Versus Fractional-Value Assessment," Proceedings of the Forty-Sixth Annual Conference on Taxation (Sacramento, Calif: National Tax Association, 1953), p. 174.

case in West Virginia; therefore, low assessments may cause many local governments to suffer a material erosion of their general borrowing and property taxing powers. Curtailment of borrowing power has in many cases resulted in further complexities of local government plus added, unnecessary cost. In Washington State, for example, where the assessment ratio is "fixed" at 50 per cent, and where the tax rate is similarly restricted, the counties have established special districts as "separate governments" although they are actually merely taxing and borrowing districts set up to skirt the legislative restrictions. The result has been, in many cases, the injudicious and costly use of revenue bonds and the creation of "authorities" through which capital facilities are financed indirectly from property taxes.

Valuations of property at less than the legal minimum have not received consistent judicial approval. In a fairly recent case the Supreme Court of New Jersey upheld assessment at 100 per cent of full value, in spite of local practice to the contrary, and vowed to uphold this principle in any case brought by an "aggrieved" taxpayer.¹⁷

¹⁷ Switz v. Middletown Township, 23 N.J. 580 (1957).

The Connecticut Supreme Court, in a similar case, has held that the under-assessment practice is invalid and counter-legislative, saying:

Nor can we overlook a further matter in demonstrating the impropriety of pursuing a role of fractional valuation. When assessors adopt such rule, they indirectly assume a role which rightfully is not theirs to plan. For if such a rule is applied, the assessment roll will obviously be smaller in amount than it would be if the mandate was carried out. Under such circumstances the borrowing power of the municipality is affected, since its indebtedness may not exceed specified percentages of the grand list. Assessors who use fractional valuations to determine their assessments therefore interfere, perhaps unwittingly but nevertheless effectively, with a power that belongs to others.¹⁸

Full-value assessment versus
Fractional valuation

Fractional valuation is frequently supported on the grounds that it makes little difference so long as there is equality of assessment. This point of view overlooks the fact that assessed value, in addition to providing a tax base, usually controls or influences certain basic fiscal powers and policies of local government. Objections to raising assessed value to full value are numerous, a popular one being that an abrupt departure from the various established conventions would result in disclosure

¹⁸ Ingraham Co. v. City of Bristol, 144 Conn. 374 (1957).

of built-in inequalities between different classes of taxpayers, loss of local government revenues, a redistribution of the tax burden, and a loss of revenue from public service corporation properties which are frequently assessed at a percentage of full value somewhat higher than local property.

Arguments in favor of assessment at full value include the following: it gives taxpayers a better opportunity to spot inequities and obtain relief; it encourages a more professional and scientific approach to the assessment function itself; and to the above ends, it makes inequalities in the assessment practice more noticeable and, thus, more subject to protest. In the words of one proponent:

Does it really make any difference whether assessments are at full or at a fraction of full value? From the point of view of uniformity, it probably does not, although it is often said that relative under- or over-assessment is more easily discerned at full value. There is probably some truth in this, which would impel me to believe that assessments would be better made if their levels were up reasonably near where they ought to be.¹⁹

The Assessment Practice

The manner in which assessments are currently administered helps to account for the inequities which might

¹⁹Thomas A. Byrne, "Full Value Assessments in Practice: Reasons For Under-Assessment," *Assessors' News Letter* (International Association of Assessing Officers), XXV, No. 1, January, 1959), 3-7.

exist, as well as to account for the general under-assessments which are prevalent. Without coordination of the assessment practice within a state where there are a number of independent assessors, there may be a number of divergent opinions. With a separate assessor employed in each of the state's localities, large or small, the rate of compensation generally has been quite low.

Revealing that, in 1956, nearly 60 per cent of the assessors in New York State earned less than \$500 per year, the New York director of the equalization board commented: "Is it any wonder that the assessing job in many towns and some cities is confined primarily to copying last year's roll?"²⁰ An economist at the University of Washington similarly observed that

. . . it should be said that the compensation paid these officials is grossly malproportioned to the importance and technical character of the assessment function. If technical qualifications were required of those standing for election as county assessor, based on specialized training and accepted professional standards, it is questionable whether there would be any candidates for this office.²¹

The conclusion to be drawn from these statements is that the assessment function has been divided into too

²⁰ Frederick L. Bird, "Equalization in New York," Proceedings of the Forty-Ninth Annual Conference on Taxation (Sacramento, Calif: National Tax Association, 1957), p. 228.

²¹ James K. Hall, "Equalization of Property Assessments in Washington," in Ibid., p. 213.

many segments, few of which are capable of supporting a qualified assessing office. As early as 1941 the National Association of Assessing Officers reported that:

The political subdivision serving as an assessment district should have sufficient resources to afford adequate assessment machinery, and should provide an assessment task large enough to realize the economies of large-scale operations and to warrant the employment of one full-time assessor and at least one full-time assistant.²²

Though it is true that the assessment function has not been given adequate consideration in many localities it is equally true that certain other localities have made considerable effort to improve their assessment practice and to achieve a greater degree of uniformity and equity. A brief examination of the procedure developed in the City of Richmond, Virginia, for the assessment of income-producing properties illustrates some of the efforts made in this direction.

Assessment of Income-Producing Properties,
City of Richmond, Virginia²³

The City of Richmond has used capitalized income to determine assessed values for over twenty years;

²² Report of the Committee of Assessment Organization and Personnel (Chicago, Ill.: National Association of Assessing Officers, 1941), p. 51.

²³ The data following result from a personal interview with Mr. Richard A. Chandler, Assessor of Real Estate, City of Richmond, Virginia. With Mr. Chandler's permission, considerable use of data provided by Mr. Chandler is made. Date of interview: July 21, 1960.

consequently, its method of using this technique, as evolved over the years, is relatively well-developed. The advocates of this procedure point to six key reasons for its use:

1. To demonstrate that assessments are not arbitrarily made and to instill confidence in assessments by conforming with the practices of the market. On income producing properties particularly, lack of use of this approach creates public skepticism in the value estimate.
2. To provide an essential check on the other approaches to value.
3. To provide a measure of all forms of depreciation.
4. To avoid the elimination of basic concepts of value. Each of the three approaches attempts to measure a different motive and each is based upon different theories, laws and principles of economics and value. To ignore this approach is to ignore established concepts of value.
5. To comply with the rulings of the courts and thus avoid having an assessment declared erroneous. Since 1861, Supreme Courts of various states and the United States have insisted that the rental or income of a property must be considered and evaluated in determining assessed values.
6. To produce equitable assessments based upon fair market value, which is required by law in most assessing jurisdictions.

Use of gross income rather than net income

In utilizing the capitalization method, one of the first decisions confronting an assessor is whether to use gross income or net income. The City of Richmond uses gross income for three reasons. First, the use of gross

income in mass appraisals makes it unnecessary to study large volumes of income and expense statements, some of which are distorted. Second, the use of gross income assures the prudent manager of real estate that he will not be penalized in favor of the inefficient or imprudent manager. Last, the use of gross income leads to uniformity and equality and, thus, equitable assessments.

Use of rental value rather than actual rental

In determining value based on income the question arises whether to use the actual rent a property produces or whether to use its rental value. Once again, the City of Richmond prefers to use economic income, or rental value, following the recognized practice in the appraisal profession at large. The use of this value avoids erroneous values created by using unusually high or low leases. Actual rental income would develop different values and would result in inequitable assessments.

The problem of estimating rental value

There are numerous sources of obtaining this data. An analysis of what the majority of similar space is renting for frequently helps ascertain the rental value of a particular piece of property. Also used in the City of Richmond is the device in which gross sales of the property are determined, and using a percentage lease

table, estimating the percentage of gross sales that the particular type of business can afford to pay for rent.

Selection of the proper capitalization rate

In the City of Richmond three methods or sources are utilized for selecting gross rates. First, whenever there is a transfer of income producing property, the assessor's office obtains the gross income, the sales price and the operating statement when available. The rate is then determined by dividing the sales price into the income. The resultant rate is then catalogued as to the type property and location, from which a pattern is developed.

Second, informed opinion of realtors and appraisers has, over a period of time, helped to develop gross rates for each type of rental property according to condition, use and location.

Finally, the "built-up" method is used to determine the proper gross rate either for a general class of property or for an individual piece of property. The gross rate is composed of the interest rate, the depreciation rate and normal expenses expressed as a rate. To develop the gross rate by the built-up method, only the typical operating ratio of the type property under study, the typical land and building ratio, and either the interest rate and estimated remaining economic life or the over-all rate need be known. The typical operating ratio can be ascertained from national studies or from analyses of operating expense

statements of similar properties. The use of typical or average operating ratios in lieu of actual expenses or other methods is preferred for the same reasons gross income is used rather than net income. The typical land and building ratio on any general class of property is normally generally known or can be readily obtained. Interest rates and depreciation rates or over all rates are obtainable from the market. The processing of these items into a gross capitalization rate is illustrated in Table 6.

Appropriate use of the capitalization process

This process is most generally used in those cases where the real estate market itself gives prime consideration to value factors such as anticipated earnings or income producing potential. These cases would include commercial stores, apartment houses, factories, theatres, shopping centers, motels and similar properties.

Illustrations

In Table 6 the gross capitalization rate for apartment property, with gross income of \$19,500, is determined. It will be noticed that if the gross capitalization rate, determined therein to be 18 per cent, is divided into the gross income of \$19,500, the capitalized value of \$108,333 is determined. To see how reliable this method is, Table 7 is presented, using the income approach to value;

TABLE 6

GROSS CAPITALIZATION RATE

Capitalized Value of An Apartment Building

Typical operating ratio	55%
Typical ratio of land to total	20
Typical ratio of building to total	80
Interest rate	6
Remaining economic life, 40 years	2½
Gross rental per year	\$19,500

Rates:

Land, 20% x 6%	1.2%
Building, 80% x (6% / 2½)	<u>6.8</u>
Over-all rate	<u><u>8.0%</u></u>

If expenses represent 55% of gross income then the over-all rate (8.0%) represents 45%.

Gross capitalization rate equals 100.0%.

Therefore, 45% of X = 8.0%

$$X = 18.0\% \text{ (gross capitalization rate)}$$

Capitalized value = \$19,500 divided 18.0% =
\$108,333

TABLE 7

INCOME APPROACH TO VALUE OF AN APARTMENT BUILDING

Based on Actual Operating Statement

Gross income (100% occupancy)	\$19,500
Less: vacancy and collection loss of 5%	<u>975</u>
Effective gross income	\$18,525
Less:	
Operating expenses	\$6,026
Depreciation (<u>excluding building</u>)	930
Other fixed charges	<u>2,590</u>
Total expenses	<u>9,546</u>
Net income to land and buildings before depreciation on building	\$ 8,979
Return on land value \$25,000 at 6%	<u>1,500</u>
Net income imputable to building before depreciation on building	<u>\$ 7,479</u>
<u>Computation of value:</u>	
Estimated remaining economic life of building is 40 years, interest and depreciation therefore is 8.5%. Net income before depreciation \$7,479 capitalized at 8.5% =	\$87,988
Add land value	<u>25,000</u>
Indicated value of the property by capitalization	<u>\$112,988</u>

that is, valuing the real estate based on reconstruction of an actual operating statement and using building residual straight line depreciation technique of capitalization.

As can be seen in an examination of the two preceding tables, the application of the gross capitalization rate yields an estimated value which varies less than 5 per cent from the \$112,988 developed from the full processing. Another example to be considered is a warehouse, one story, with 7,000 square feet of rental space. The warehouse was built in 1948 and has an estimated remaining useful life of fifty years. From the trend tables of the City of Richmond it was ascertained that typical rental for similar properties is 60¢ per square foot and that the average gross rate of capitalization for such property is an estimated 12 per cent. Seven thousand square feet at 60¢ per square foot would yield \$4,200 of gross income which, when capitalized at 12 per cent, gives a value of \$35,000.

Table 8 shows a value indicated by the time-consuming income approach of \$38,344. This compares with the value, \$35,000, obtained through the use of a gross capitalization rate. Thus, it is seen that appraisal and assessment tools are available to the harassed assessor and will provide within a tolerable range equitable and uniform assessments with a minimum staff. Though these tools exist and can facilitate the informed assessor in his task,

TABLE 8
WAREHOUSE VALUE INDICATED BY INCOME APPROACH²⁴

Gross income: 7,000 square feet @ 60¢	\$4,200.00
Less: vacancy and collection loss, 3%	<u>126.00</u>
Effective gross income	\$4,074.00
Less:	
Management fee, 6%	\$244.44
Taxes	600.00
Insurances	122.00
Repairs and maintenance	100.00
Reserve for depreciation:	
Roof	100.00
Heaters	<u>40.00</u>
Total	<u>1,206.44</u>
Net income before depreciation on building	\$2,867.56
Return of land value, 6% of \$10,000	<u>600.00</u>
Net income imputable to building	\$2,267.56
Interest rate 6%; remaining economic life of building is 50 years, or 2%. Capitalization rate for interest and depreciation 8%. \$2,267.56 capitalized at 8% equal	\$28,344
Add value of land	<u>10,000</u>
Value indicated by income approach	<u>\$38,344</u>

there is still a wide range in which he must use his judgment. For example, property substantially identical in every respect may vary in market value because of improving or deteriorating neighborhoods, location in respect to bus service, shopping or schools, scenic views, noise,

²⁴Excerpt from independent appraisal of this warehouse.

and a multitude of other factors. Where staff is inadequate or incompetent, it is impossible to stay abreast of all the changing factors. As a result, frequent unequal assessment or under-assessment becomes a major deficiency in the assessment practice.

Summary

This general review of assessment administration commenced with a discussion of the basic problems facing the assessing officer. First, property subject to taxation must be located and placed on the tax rolls. Second, a reasonable valuation of such property must be made. It was noted that both of these problems are frequently complicated by the fact that not only are valuations difficult to make for all types of property but also the assessing office is frequently limited as to staff and operating funds.

As a result both of these internal limitations of the assessing function and of the fact that not all property within a given locality is assessed by the same office, unequal assessments within taxing districts and between taxing districts may give rise to discrimination in ad valorem taxation. If assessments which are not equal result in inequities, then the alternative of uniform assessments must be followed to insure a greater degree of equity. In making uniform assessments, however, it was noted that certain problems remain. Should all

assessments be made at "full value" or uniformly at some fraction of full value? The general conclusion was reached that from the point of view of uniformity it probably makes no difference; however, from the point of view of the fiscal powers and policies of local government as well as of the best interests of property owners, assessments closer to full value seem more desirable.

Finally, the procedure as has developed in the City of Richmond, in respect to the assessing function, was examined in order to show what one city has done toward achieving reasonable uniformity in the assessment of its nonutility properties in spite of fiscal limitations. The significance of this general review of assessment administration for purposes of this study lies in the extreme importance attached by the utility industry to the assessment of nonutility properties. Utility property is currently assessed centrally and where assessment administration within the localities differs from the administration of central assessment, inequalities and possibly inequities, the object of inquiry in this study, are likely to exist.

Turning from a general review of assessment administration to the assessment practice in Virginia, it is felt that an analysis of the specific facts as they exist in Virginia will reveal whether there is in fact cause for concern at the variance between central and local assessment administration.

CHAPTER 4

THE ASSESSMENT PRACTICE IN VIRGINIA

General Practice

Constitutional and statutory provisions to the contrary, the practice of assessing property at some percentage of full value has been approved by the courts. In Virginia, the courts have permitted the separate classification of utility property and its assessment at a percentage of market value, even where nonutility property is assessed at different ratios between and within taxing districts.¹ Decisions in other states offer similar conclusions, a more recent court in Kentucky holding that assessments at some ratio of market value was acceptable in the interest of uniformity and equity, in spite of a constitutional requirement to assess at full value.²

Comparison of Assessment Ratios in Virginia

An examination of Table 9 of assessment ratios in Virginia reveals some characteristics of the assessment

¹City of Richmond v. Commission, 188 Va. 100, 59 S.E. 2d 654 (1948).

²Luckett v. Tennessee Gas Transmission Company, Ky. 331 S.W. 2d 879 (1960).

TABLE 9

RATIOS OF ASSESSED VALUE TO SALES VALUE OF REAL ESTATE,
COMMONWEALTH OF VIRGINIA, 1956

Cities		Counties	
1.	Richmond	81.0%	12.
2.	Danville	66.0	13.
3.	South Norfolk	53.0	14.
4.	Lynchburg	46.8	15.
5.	Falls Church	45.1	16.
6.	Winchester	44.8	17.
7.	Fredericksburg	44.2	18.
8.	Colonial Heights	43.2	19.
9.	Clifton Forge	41.2	20.
10.	Norfolk	40.9	21.
11.	Martinsville	40.7	22.
		39.7%	9.
		31.9	10.
		31.3	11.
		31.2	12.
		29.7	13.
		29.3	14.
		28.4	15.
		28.2	16.
			27.4%
			26.9
			26.6
			26.4
			26.4
			25.5
			25.2
			24.6
			27.0%
			18.
			19.
			20.
			21.
			22.
			23.
			24.2%
			23.9
			23.5
			23.2
			23.0
			22.4
			24.7%
			24.2
			23.9
			23.5
			23.2
			23.0
			22.4
			24.7

TABLE 9 (continued)

Source: Virginia Department of Taxation, 1956 Real Estate Assessment Ratio Study.

practice in this state. Table 9 is based upon a 1956 study made by the Virginia State Department of Taxation and represents the latest such study so made. It shows that the assessment ratios generally are higher in the cities than in the counties, the weighted average for cities being 45.9 per cent, the assessed value being stated as a percentage of sales value, while the statewide weighted average county assessment ratio is only 22.3 per cent.³ Seventy-five counties of a total of 98 show ratios less than the statewide weighted average for counties, and 28 out of 32 cities have ratios below the statewide weighted average for cities. Of significance is the fact that the median assessment ratio for all cities is 36.0 per cent, considerably less than the weighted average. For the counties this picture is similar, the median being 18.3 per cent, four percentage points lower than the statewide county ratio. To further illustrate the wide variations in assessment ratios, the two extremes should be considered. The lowest assessment ratio exists (as of 1956 at least) in Washington County, where the ratio is 6.5 per cent. This is contrasted with an assessment ratio in the City of Richmond of 81.0 per cent. This comparison, of course, is one between an urban area, complete with its

³The weighted averages were obtained by dividing assessed values by sales values, in toto, for the specific taxing districts in question. These data were supplied by the Virginia Department of Taxation.

generally higher requirements for governmental services, and a rural community whose requirements for a high-budget government are relatively less. Where the inequities exist, however, is not shown by this simple comparison of assessment ratios.

Table 9 does show that some problem, and probably some inequity, will accrue to property owners with domicile in one taxing district and substantial requirements for government services in another in which business is transacted. Further, when the state constitution requires uniformity of taxation between taxpayers of the same class, then this mandate is violated when taxpayers of the same class, operating in different taxing districts, are subjected to assessment ratios as widely varying as those in Virginia.

In order to emphasize the above points, Figure 1 has been prepared to show the distribution by counties of assessment ratios. The most striking divergencies from market value occur in the southwest part of the state where almost all of the assessment ratios less than 15 per cent are in effect. On the other hand, with but a few exceptions, the highest ratios are found in the more urban counties in the eastern Tidewater area.

Further examination of Figure 1 yields an additional observation, especially in respect to the possible effects of such widespread deviation in assessment ratios on public service corporations. The property of public

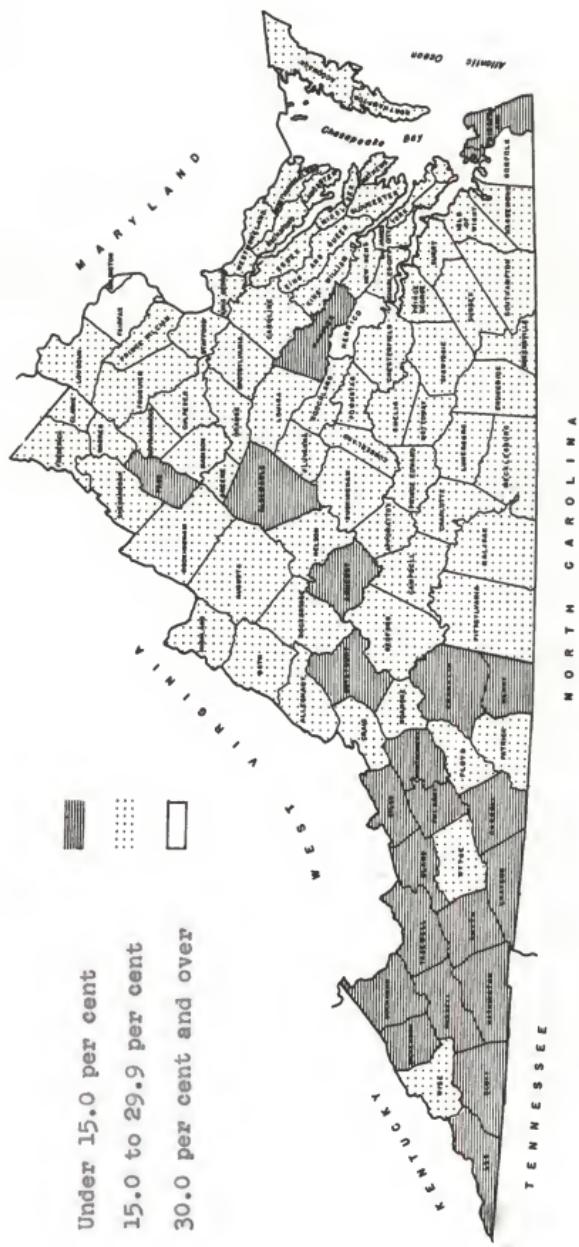


Figure 1

Assessment Ratios by Counties, Commonwealth of Virginia, 1956

service corporations is assessed by the Virginia State Corporation Commission at 40 per cent of "market value," this percentage originating from a statewide average assessment ratio study conducted by the Commission. After assessment by this central agency, local assessors apply local rates of levy against the assessed values of such public service corporation property with situs in the locality. Where the assessment ratios are lowest, that is, where the difference between the local assessment ratio and the 40 per cent ratio applied on public service corporation property is the greatest, public service corporations carry a disproportionate share of the local tax burden.

Since a single public service corporation rarely operates throughout the entire state, application of a statewide average assessment ratio produces the greatest inequalities when applied to a public service corporation doing business mainly in the low ratio counties. Tables 10 and 11, utilizing as an example the data relative to the service area of one public service corporation which operates in the central and western sections of the state, illustrate this particular inequality.

Table 10 shows the amount of property taxes this company would have had to pay, in 1959, had its assessed values been determined by the weighted average assessment ratio

TABLE 10

COMPARISON OF ACTUAL TAXES PAID AND TAXES PAYABLE USING
AVERAGE STATEWIDE ASSESSMENT RATIOS, TAX YEAR 1959

A Southwestern Virginia Power Company

	Counties	Cities	Towns ^a	Total
Fair market value of property ^a	\$162,693,521	\$119,238,845	\$	\$181,932,366
Assessed value ^b	65,077,406	7,695,537		72,772,943
Assessed value if average statewide assessment ratio used	51,248,459	6,060,237		57,308,696
Reduction in assessed value	13,828,947	1,635,300		15,464,247
Actual taxes paid	2,298,941	224,221	81,724	2,604,886
Taxes payable if average statewide assessment ratio used	1,810,521	176,584	64,381	2,051,486
Possible tax saving	488,420	47,637	17,343	553,400

Source: Reports and working papers of the Virginia State Corporation Commission.

^aAs certified by the Virginia State Corporation Commission. ^bRepresents 40 per cent of fair market value. Represents average statewide assessment ratio of 31.5 per cent. ^cSame average tax rate was applied to revised assessed values. The assessed value of property located in towns, although taxed by the towns, is included in the county totals.

COMPARISON OF ACTUAL TAXES PAID AND TAXES PAYABLE USING
AVERAGE SYSTEMWIDE ASSESSMENT RATIO, TAX YEAR 1959

A Southwestern Virginia Power Company

	Counties	Cities	Towns ^e	Total
Fair market value of property ^a	\$162,693,521	\$19,238,845	\$	\$181,932,366
Assessed value ^b	65,077,406	7,695,537		72,772,943
Assessed value if average systemwide assessment ratio used ^c	37,744,898	4,463,412		42,208,310
Reduction in assessed value	27,332,508	3,232,125		30,564,633
Actual taxes paid	2,298,941	224,221	81,724	2,604,886
Taxes payable if average systemwide assessment ratio used ^d	1,333,462	130,055	47,419	1,510,936
Possible tax saving	965,479	94,166	34,305	1,093,950

Source: Reports and working papers of the Virginia State Corporation Commission.

^a As certified by the Virginia State Corporation Commission.

^b Represents 4.6 per cent of fair market value.

^c Represents average systemwide assessment ratio of 23.2 per cent.

^d Rate of taxation held constant.

^e The assessed value of property located in towns, although taxed by the towns, is included in the county totals.

existing in Virginia, in 1956,⁴ instead of the 40 per cent ratio actually employed. The assessed valuation would have been reduced by \$15,464,247 and the actual tax liability, assuming the rate of taxation to remain constant, would have been reduced by \$553,400. Although the 40 per cent assessment ratio may have correctly reflected the statewide average at the time of its original computation, its use in the present instance resulted in overburden of taxation. Had the spirit prevailed, in 1959, which gave rise originally to equalization of public service corporation property at the statewide average assessment ratio, the instant company would have had a tax bill more than 20 per cent less than the one actually received and paid. This is not to say that the burden of taxation was too great; however, it is notable that the equalization factor used no longer equalizes.

Table 11 brings out the same conclusion more emphatically. In the preparation of this table, instead of using the weighted average statewide assessment ratio of 31.5 per cent, the weighted average assessment ratio prevailing in the service area of the company studied was

⁴There is little reason to believe that assessment ratios have altered appreciably since this last study was made in 1956. The Virginia Department of Taxation holds this view and has no plans in the near future to conduct another study of assessment ratios.

employed.⁵ This ratio is the weighted average ratio imposed on all nonutility property in the company's service area and compares even less favorably with the present statewide average ratio.

It should be noted that had an average ratio of assessed values to market values prevailing in the area served by this company been used instead of the utility ratio of 40 per cent, the assessed value of taxable property would have been reduced by \$30,564,633 and the ultimate tax burden would have been lowered by \$1,093,950.

It has been observed that there exists a considerable difference between the statewide average assessment ratio and the ratio which prevails on the average throughout the area served by the company studied. The resultant tax burden which accrued from the use of the utility ratio of 40 per cent, and without consideration of the statewide average ratio, has been shown to be discriminatory. An even greater discrimination can be shown, moreover, if a similar comparison is made of the effect of using the utility ratio as opposed to using the average assessment ratios prevailing in the cities and counties served by the company, each considered separately. This

⁵The weighted average was obtained by dividing assessed values by sales values, in toto, for the specific taxing districts in question. These data were supplied by the Virginia Department of Taxation.

comparison is made in Table 12, which uses the average assessment ratio existing in the cities served by the company, 42.3 per cent, and the average ratio employed by the counties in this same service area, 14.7 per cent.⁶

If these service area assessment ratios are used, separated as to cities and counties, it is noticed that this particular company would have saved in property taxes more than 50 per cent of its actual tax bill for 1959. In addition, the amount of taxes thus saved, \$1,492,865, would have amounted to almost three times the savings which would accrue if the statewide average assessment ratio were used. Thus, if the 40 per cent assessment ratio used to value public service corporation property for property tax purposes is discriminatory to all public service corporations, the discrimination is compounded in the case of this one utility which is faced with a local situation in respect to assessment ratios even worse than the use of the 40 per cent statewide average assessment ratio precipitates.

One other observation is to be gleaned from an examination of Table 12, namely, that if service area assessment ratios were used, separately for cities and counties, the company in question would have ended up paying more

⁶ The weighted average was obtained by dividing assessed values by sales values, in toto, for the specific taxing districts in question.

TABLE 12

COMPARISON OF ACTUAL TAXES PAID AND TAXES PAYABLE USING SEPARATE
AVERAGE ASSESSMENT RATIOS FOR CITIES AND COUNTIES, TAX YEAR 1959

A Southwestern Virginia Power Company

	Counties	Cities	Towns	Total
Fair market value of property ^a	\$162,693,521	\$19,238,845	\$	\$181,932,366
Assessed value ^b	65,077,406	7,695,537		72,772,943
Assessed value if separ- ate city and county ratios are used ^c	23,915,947	8,138,030		32,053,977
Reduction in assessed value	41,161,459	(442,493)		40,718,966
Actual taxes paid	2,298,941	224,221	81,724	2,604,886
Taxes payable if separate city and county ratios used	844,861	237,126	30,034	1,112,021
Possible tax saving	1,454,080	(12,905)	51,690	1,492,865

SOURCE: Reports and working papers of the Virginia State Corporation
Commission.

^aAs certified by the Virginia State Corporation Commission.

^bRepresents 40 per cent of fair market value.

^cCities, 42.3 per cent; counties, 14.7 per cent.

Rate of taxation held constant. The assessed value of property located in towns, although taxed by towns, is included in the county totals.

property tax to the cities than they actually paid. The explanation for this lies in the fact that the city average assessment ratio, in this company's service area, is 42.3 per cent, slightly higher than the assessment ratio applied to public service corporation property. The significance of this fact is that the cities, in their efforts to raise more revenue, have at the same time achieved more uniformity and equity in property taxation by taxing nonutility property owners to at least as great an extent as public service corporations are taxed.

That the city average assessment ratio, in this service area, exceeds the ratio of assessed value to "full" value on utility property is indicative of greater local effort on the part of the cities; however, it is not an indication that the cities are being discriminated against in favor of the utilities. Public service corporations are rigidly controlled and all records of such corporations are made readily available to state regulatory agencies periodically. As a result, there is no piece of utility property which escapes the tax rolls. On the other hand, although there are few statistics available, there exists considerable property of nonutility property owners, both businessmen and individuals, which either never finds its way onto the tax rolls or receives preferential treatment by local assessors.

Evidence in support of the assertion that some property never finds its way onto the tax rolls is not easy to find,

precisely because such property is not on the tax rolls. Some state and local officials are, however, aware of instances of this practice. For example, a Virginia State Corporation Commission official revealed that certain gas line property in southwest Virginia, not subject to state regulation, had not appeared on the tax rolls since its construction over ten years ago, and was just discovered while making aerial photographs of that section of the state.⁷ Where certain property owners are not subject to the rigid regulation imposed on public service corporations, the lack of public knowledge of existing property allows the owner to "neglect" to report same. This is especially true of personal property of certain types. In the City of Richmond, for example, it was revealed that, in 1958, only six diamond rings with a value in excess of \$1,000 were reported for personal property tax purposes.⁸ Although real property is more easily detectible than diamond rings, one is led to suppose that a similar situation could and does exist in real estate assessments, if but to a lesser degree.

⁷ Personal interview with Mr. Lee B. Younger, Assistant Director, Public Utilities Taxation, Virginia State Corporation Commission, July 7, 1960.

⁸ Personal interview with Mr. Cornelius Sykes, Treasurer's Office, City of Richmond, Virginia, July 8, 1960.

Numerous reports of annexation proceedings, where surveys are required, show that property has been discovered which the local assessors never knew existed.⁹ It is reasonable to assume, then, that this property for some unknown time escaped taxation entirely. Further, general re-assessments are made only periodically, generally in Virginia no less than each six years. During this time it is reasonable to assume that certain new construction goes undetected for property tax purposes, and if well hidden may escape the tax rolls indefinitely.

That certain property owners receive preferential treatment by the tax assessor is even more difficult of authentication. Although local assessors are undoubtedly guilty of dereliction of duty in certain isolated cases, it is to be expected that preferential treatment of certain property arises mostly from error and from the lack of scientific precision in the assessment procedure.

One city and two counties were selected to observe the extent to which preferential treatment can be given to property owners. Personal interviews with state and local officials revealed that, although these localities may engage in other discriminations as discussed elsewhere in this thesis, the assessing officials had performed their jobs with conscientious objectivity in minimizing

⁹Personal interview with Mr. Lee B. Younger.

preferential treatment. Table 13 shows that in the case of Roanoke City, a random sample of 29 per cent of all sales of real estate revealed that property with a sales value of less than \$5,000 was being assessed at 40.6 per cent of that value on the average, while property selling for between \$25,000 and \$30,000 was being assessed at only 30.3 per cent of sales price. This same situation prevailed in Dickenson County where, although real estate values were generally much lower than those in Roanoke City, the lowest classification of property by sales prices was assessed at 11.9 per cent of sales price while the relatively higher priced property, in the \$10,000 to \$15,000 classification, was assessed at only 2.0 per cent. Similarly, in Giles County, the ratio of assessed values to sales prices declined noticeably as the sales prices increased. Figure 2 shows these data graphically.

It appears, therefore, that some property escapes taxation through the device of consistent underassessment. This assessment practice results in inequities between taxpayers of the same class, depending upon the value of their property while at the same time perpetuating the discrimination against public service corporations. Referring again to Table 13, Giles County provides an excellent example. In Giles County the average assessment ratio, based upon the 1956 Department of Taxation study, was 13.4 per cent, although from Table 13 it is seen that the assessment ratio ranged from 7.9 per cent to 19.7 per

TABLE 13

RATIOS OF ASSESSED VALUE TO SALES PRICE,
REAL ESTATE, SELECTED LOCALITIES, 1956

Sales Prices by Classification	Roanoke City ^a	Dickenson County ^b	Giles County ^c
Under \$5,000	40.6%	11.9%	19.7%
\$5,000 to \$9,999	34.7	5.0	15.2
\$10,000 to \$14,999	34.6	2.0	10.1
\$15,000 to \$19,999	34.1	---	10.3
\$20,000 to \$24,999	31.3	---	---
\$25,000 to \$29,999	30.3	---	7.9
Over \$30,000	31.6	---	7.9

Source: Working papers, Virginia Department of Taxation, 1956 Real Estate Survey.

^aBased upon a random sample of 224 out of 772 real estate sales.

^bBased upon examination of 125 out of 125 real estate sales.

^cBased upon a random sample of 102 out of 333 real estate sales.

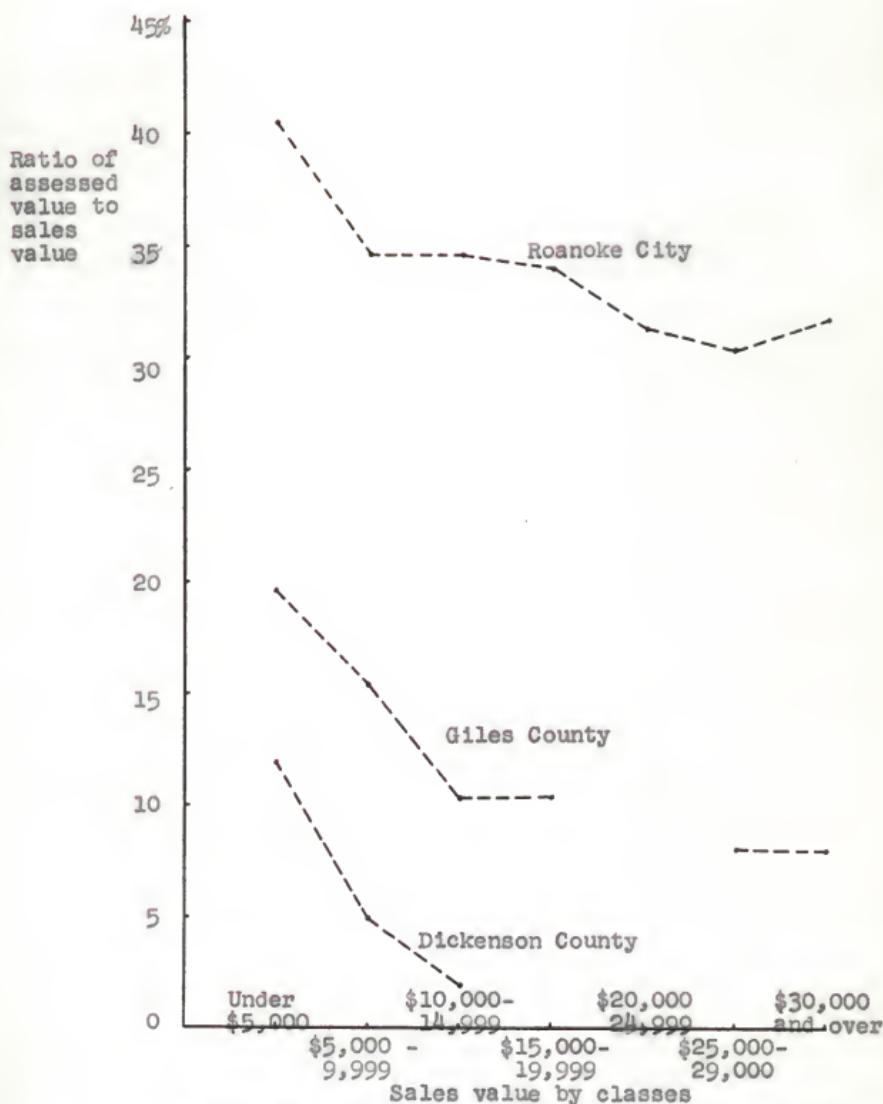


Figure 2. Assessment ratios by sales values of real estate, selected areas, commonwealth of Virginia, 1950

cent. Neither the county average of 13.4 per cent nor the highest rate of assessment, on low-value property, compares favorably with the 40 per cent assessment ratio borne by public service corporations with property located within the county. Thus, not only is there discrimination between public service corporations and other property owners generally, but also there is discrimination between nonutility property owners.

Significance of Local Assessment Ratios

The significance of the preceding assessment ratio schedules is twofold. On the one hand they show that discrimination results from the application of an outdated utility assessment ratio. Although a 40 per cent assessment ratio may have at one time actually reflected a statewide average ratio of real estate assessments, it is presently considerably less than 40 per cent, a factor which results in discrimination against public service corporations still assessed on that basis. On the other hand, not only does a utility which serves the low-ratio areas of the state find itself discriminated against on a statewide basis, but also it suffers additional discrimination by virtue of the fact that nonutility property owners in its service area enjoy assessment ratios even less than the statewide average.

It has been shown that, in the case of one utility, a substantial savings in tax would have been realized, in

1959, had public service corporations been assessed on some basis more nearly reflecting current assessment practice. Had this same company been located in the relatively high-ratio eastern Tidewater area the tax saving would not have appeared as large. Thus, one might conclude that not only do public service corporations generally suffer discrimination as a result of the actual statewide assessment ratio being less than the 40 per cent ratio applied to utility properties, but also a second layer of discrimination exists as between public service corporations to the extent that one company may bear a larger proportion of the tax burden in its service area than another utility may bear operating in an area making a greater local effort.

Geographical Dispersion of Assessment Ratios

Referring once more to Figure 2, one is hard pressed to find a reasonably complete explanation for the geographical dispersion of assessment ratios. It has been suggested that possibly the answer lies in the relative values of farm land in the various sections of the state.¹⁰ In the western section, where agricultural land is both more productive and commands a higher price per unit than farm land in the eastern section, a lower assessment of full value

¹⁰ William H. Stauffer, Taxation in Virginia (New York: The Century Company, 1931), p. 84.

will produce a tax base similar to that resulting from a high assessment of low-value land. Along these same lines, it is not unlikely that when the property tax was a state device for obtaining state revenues these same high land value areas encouraged low local assessment ratios in order to prevent the land owners in this area from paying a disproportionate share to the state. This possibility was eliminated, of course, with the ratification of the segregation amendment; however, due to the fact that public service corporations are assessed at 40 per cent of full value by the State Corporation Commission, there has been little incentive to raise local ratios. For these reasons and no doubt others, including inertia and resistance to change, assessment ratios remain generally lower in the counties and cities in western Virginia.

The Trend of Assessment Ratios

Not only are assessment ratios generally lower in the western section of the state, but also there has been little apparent effort exerted to improve the assessment practice. If inequities existed originally to public service corporations serving western Virginia as a result of a higher assessment ratio than that imposed on nonutility property, they are more pronounced today. This has taken place as a result of declining assessment ratios on non-utility property coupled with rising rates of taxation on

all property. An examination of the cities and counties served by a southwestern Virginia power company provides a case in point.

The data assembled in Table 14 have been plotted graphically in Figure 3. In 1936, the average assessment ratio, not weighted, for the cities and counties served by this company, was 41.1 per cent, with an average nominal tax rate of \$1.87 per \$100 of assessed value. Each year presented after 1936 shows a reduction in the average assessment ratio and an increase in the levy rate. In 1956, the last year in which a state assessment ratio study was made, assessments had declined to an average of 18.7 per cent, while the average nominal rate of levy had risen to \$3.57 per \$100 of assessed valuation.

The effects of these trends on a public service corporation can be illustrated by means of a hypothetical illustration. Assume that the "total," "full" or "market" value of all property in the area served by such a corporation amounted to \$11 million in 1936, of which amount \$1 million represented the value of the utility's property and \$10 million represented the value of all other property. Applying the assessment ratio of 40 per cent to the utility property and the average ratio of all cities and counties served by the utility to all other property, a computation as shown in Table 15 can be made. The

TABLE 14

TREND OF RATIOS OF ASSESSED VALUE TO SALES VALUE
OF REAL ESTATE AND TREND OF APPLICABLE RATES OF
LEVY THEREON, CITIES AND COUNTIES IN AREA SERVED
BY A SOUTHWESTERN VIRGINIA POWER COMPANY

Selected Years

Year	Average Assessment Ratios	Average Nominal Rates of Levy Per \$100 of Assessed Value
1936	41.1%	\$1.87
1939	37.1	1.95
1942	34.5	2.09
1944	29.5	2.09
1950	21.1	2.69
1956	18.9	3.57

Sources: Virginia State Department of Taxation; study made by Dr. Russell (1942); study made by Dr. Stauffer (1944).

TABLE 15

COMPUTATION OF TAX REVENUE, AREA SERVED BY HYPOTHETICAL UTILITY, 1936

	Utility Property	All Other Property	Total
"Real," "full" or "market value"	\$1,000,000	\$10,000,000	\$11,000,000
Assessed value	400,000	4,110,000	4,510,000
Tax levy, \$1.87 per \$100 of assessed value	7,480	76,857	84,337

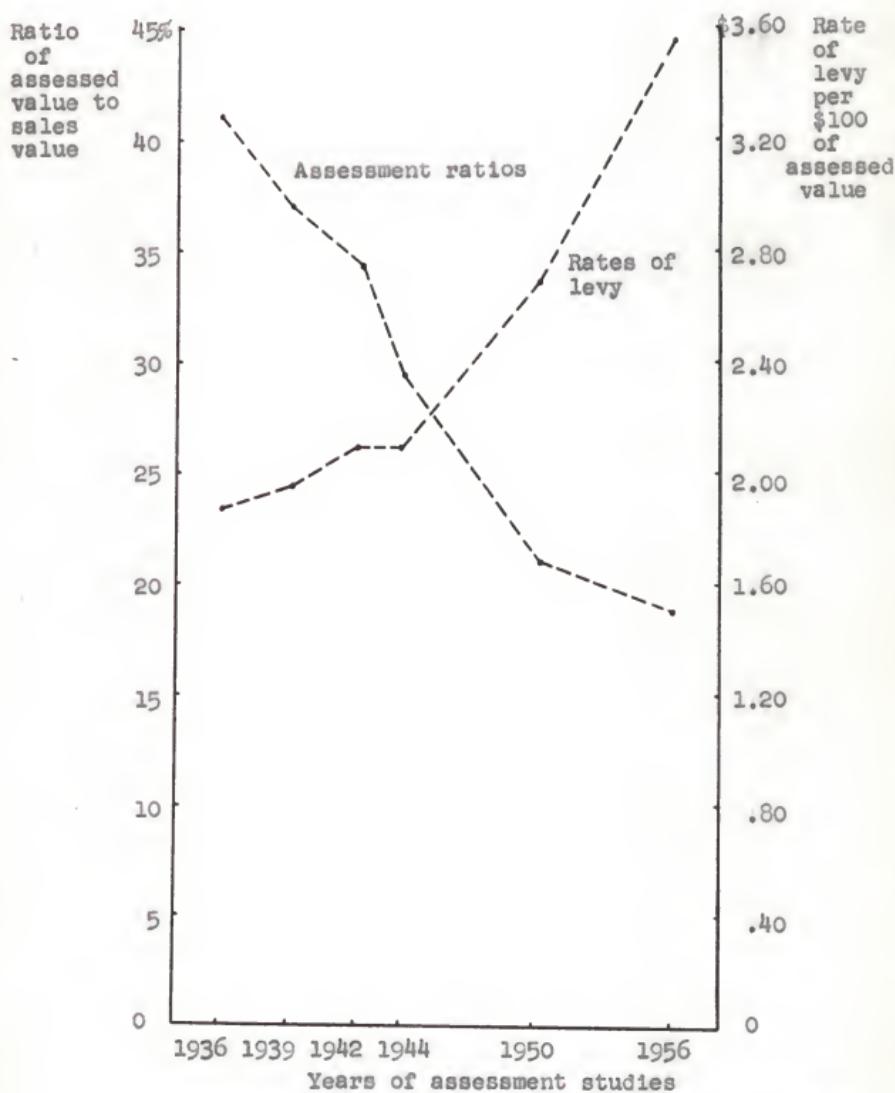


Figure 3. Real estate assessment ratios and rates of levy, service area of a southwestern Virginia power company, years of assessment studies, 1936-1956

total assessed value would amount to \$4,510,000 on which the levied rate of taxation prevailing in 1936 would yield \$84,337 in tax revenue.

If it may be further assumed, for illustrative purposes only, that only enough additional investment is made during the ensuing twenty years to maintain the identical full values as existed originally, then a shift in the tax burden can be seen. Applying the assessment ratio of 40 per cent to the utility property, and the average ratio of all other property found to exist in the service area, in 1956, to nonutility property, the following is observed in Table 16.

TABLE 16
COMPUTATION OF TAX REVENUE, AREA SERVED BY
HYPOTHETICAL UTILITY, 1956

	Utility Property	All Other Property	Total
"Real," "full" or "market value"	\$1,000,000	\$10,000,000	\$11,000,000
Assessed value	400,000	1,870,000	2,270,000
Tax levy, \$3.57 per \$100 of assessed value	14,280	66,759	81,039

What is particularly notable is the fact that the taxes levied on the utility's property increased, in this hypothetical situation, almost 100 per cent, while those imposed on all other nonutility property actually declined

well over 10 per cent. Thus, though the total tax showed a slight decline in this illustration, the relative burden placed upon the hypothetical public service corporation doubled, taking up most of the slack caused by the rapidly falling assessment ratios on nonutility property.

Wherever this inequity prevails presently, without rectification it can only be multiplied in the future if the past rate of utility growth is maintained. The rapid growth in the population of the United States in recent years has been accomplished along with an even more rapid growth in the production of goods and services. In numbers, between 1946 and 1959, the population increased by 30 million people to over 171 million people, an increase of over 20 per cent. Measured in dollars, the national income increased by \$179 billion to \$358 billion, an increase of 100 per cent. As contributors to production of national income, public utility industries increased almost 200 per cent, or in amount, by \$8.5 billion to \$13.3 billion.¹¹ That public utility services have increased in output relatively more than has the economy as a whole is indicative of the importance of these services--electricity, gas, telephone, transportation--to the American people. In fact, they play a dual role: on the one hand,

¹¹ Roland B. Eutsler and James E. Brown, "Regulated Industries and the Capital Market," Public Utilities Fortnightly (July 30, 1959), p. 3.

they are used in productive processes by other industries to contribute to their increasing output of goods and services, and, on the other hand, are used in ever-increasing quantities in the direct satisfaction of wants, witnessed by the increasing quantity of all these services in homes. To attain this position, the public utility industries have had to make ever-increasing and relatively larger investments of capital funds into property subject to the property tax.

The Experience in Giles County, Virginia

Though analyses reveal the presence now of inequities in taxation it is interesting to observe that there is also a progressing inequity imposed upon public service corporations through manipulation of assessment ratios and rates of levy. The experience of a utility company in Giles County, Virginia, is a case in point. Figure 4 shows the trend of assessment ratios on local nonutility property and of levy rates from 1936 through 1958 in Giles County. The assessment ratio declined substantially, from 32.7 per cent, in 1936, to 13.4 per cent, in 1956. Since no further study of assessment ratios has been made since 1956, it is possible that the actual assessment ratio, in 1958, for Giles County may be lesser or greater than 13.4 per cent; however, the assumption that the ratio has not changed materially since 1956 does not appear unreasonable. The rise in the rate of levy in Giles

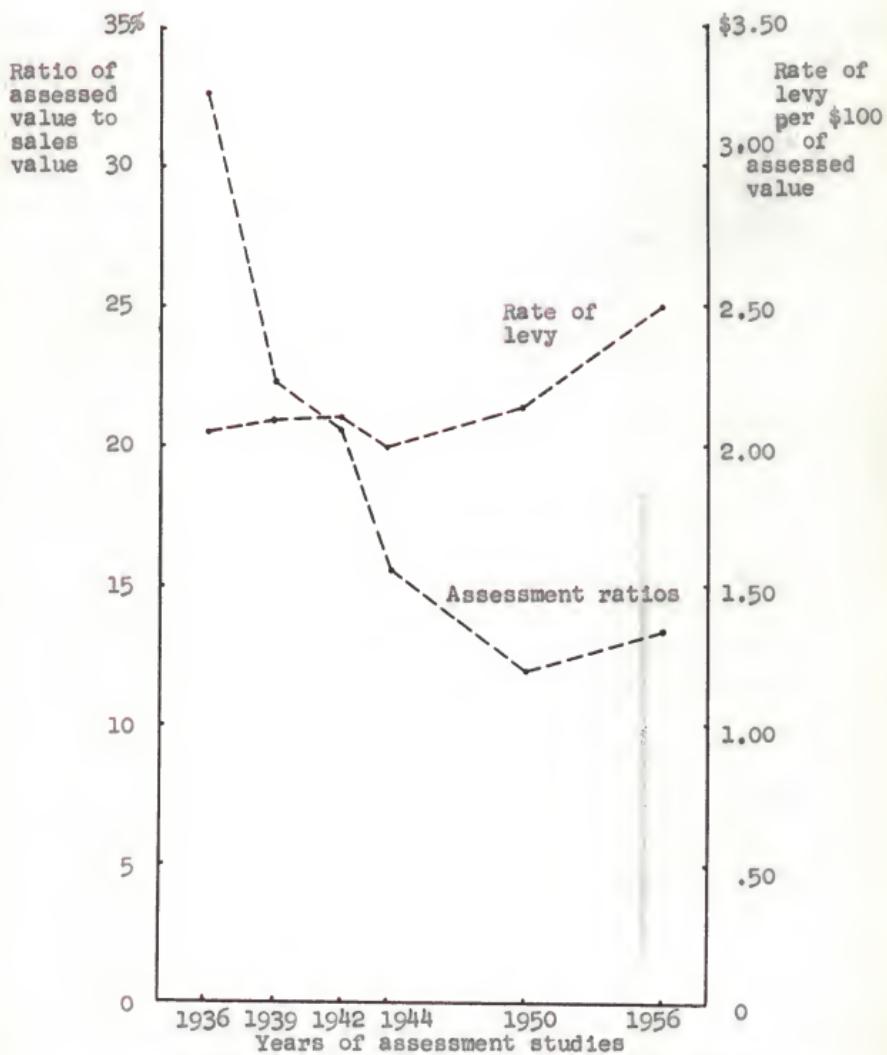


Figure 4. Real estate assessment ratios and rates of levy, Giles County, Virginia, years of assessment studies, 1936-1956.

County, although not as perceptible as the fall in assessment ratios, is nevertheless substantial, having risen from \$2.05 per \$100 of assessed value, in 1936, to a high of \$3.40, in 1957, an increase of over 65 per cent. In 1958, this rate fell to \$2.75, but again rose to \$3.40, in 1959. In order to achieve as much objectivity as possible, the year 1958, with the lower rate of levy, is chosen for purposes of this analysis.

The assessed value of all property subject to local taxation, in 1958, in Giles County, Virginia, was as follows:¹²

Real estate (nonutility)	\$ 5,923,400
Tangible personal property	2,618,540
Machinery and tools	3,334,580
Merchants' capital	496,700
Public service corporations:	
Appalachian Power Company	15,149,545
All others	<u>5,341,314</u>
Total	<u>\$32,864,079</u>

¹²Report of the Virginia Department of Taxation, Fiscal Year Ending June 30, 1959, tables 17 and 19.

If certain of these assessed values are converted to full value by means of their assessment ratios, the following comparison can be made:

Full value of real estate ¹³	\$44,204,478
Full value of tangible personal property ¹⁴	<u>19,541,343</u>
Total	\$63,745,821
Full value of Appalachian Power Company property ¹⁵	\$37,873,862

On the basis of this conversion it can be seen that the full value of real and tangible personal property of non-utility property owners was 1.68 times as great as the full value of the property of the Appalachian Power Company in Giles County, in 1958. In view of this, then, it is startling to observe the relative tax burden of these two classes of taxpayers. Taxes actually levied Giles County, Virginia, in 1958, were as follows:¹⁶

On real estate	\$ 162,893
On tangible personal property	<u>72,010</u>
Total	\$ 234,903
On Appalachian Power Company	\$ 416,612

¹³Computed by dividing assessed value of \$5,923,400 by the assessment ratio of 13.4 per cent.

¹⁴Computed by dividing assessed value of \$2,618,540 by the assessment ratio of 13.4 per cent.

¹⁵Computed by dividing assessed value of \$15,149,545 by an assessment ratio of 40 per cent.

¹⁶Report of the Virginia Department of Taxation, Fiscal Year Ending June 30, 1959, Table 21.

Thus, though the full value of the Appalachian Power Company's property was almost half that of nonutility real and tangible personal property, its tax burden was 1.77 times as great. This inequality in taxation arises out of the assessment practice: the power company's property was assessed at 40 per cent of "full" value; other nonutility property was assessed at only 13.4 per cent. As has been shown, this assessment ratio of 13.4 per cent has evolved from a series of reductions in the assessment ratio and, concurrently, a gradual shifting of the tax burden to public service corporations including, in particular, the Appalachian Power Company which owns approximately 75 per cent of all public service corporation property located in Giles County.

Other Effects of Under-Assessment
in Giles County, Virginia

The inequity illustrated above is not limited, furthermore, to that which the observed power company itself bears, but is felt as well by the customers of the company. Because the situs of generating equipment is the basis for allocating assessed value for purposes of taxing public service corporation property, the taxing districts in which such property is located frequently reap benefits from taxation out of proportion to the revenues they contribute as consumers.

The consumers of electricity in the cities, where little generating equipment is located, must pay, through

their utility rates, funds sufficient enough to allow the public service corporation to pay more property taxes to those districts in which more of the property is located. As has been seen, the situs basis of property taxation is one factor which causes certain localities to lower their assessment ratios, forcing the public service corporations located therein to bear an unequal share of the tax load. Accordingly, although the cities, with their concentration of people, consume larger quantities of power than the less densely populated counties and thus contribute more revenue to the utility serving them, they have been denied revenue themselves, notwithstanding the fact that generating equipment benefits the entire operating system of the utility in much the same way as rolling stock of railroads is deemed to be of benefit to an entire system.

Table 17 illustrates the effect of low assessment ratios in localities with a large proportion of utility investment located therein. This table shows that in Russell County, wherein is located 57.2 per cent of all state-based generating equipment of one southwestern Virginia power company, the assessment ratio on nonutility property is roughly but a fourth of the statewide average and only 21.1 per cent of the assessment ratio applied to public service corporation property. This indicates that local taxpayers in these counties are escaping some taxation which they would have to bear were it not for the location and taxation of public service corporation property within their boundaries.

TABLE 17
INVESTMENT AND ASSESSMENT DATA
SELECTED COUNTIES, 1959

A Southwestern Virginia Power Company

	Giles County	Russell County
Investment in generating equipment ^a	\$10,420,700	\$15,510,700
Per cent of total system generating equipment	38.4%	57.2%
Local assessment ratio	13.4	8.5
Local assessment ratio as a per cent of statewide average ratio ^b	42.5	26.9
Local assessment ratio as a per cent of utility ratio ^c	33.5	21.2

^aAnnual Report to the State Corporation Commission of Virginia, Appalachian Power Company, April 15, 1960, schedule II.

^b31.5 per cent as of 1956.

^c40 per cent.

To the extent that some taxes are thus avoided by non-utility property owners in these and other similarly situated localities and is transferred to public service corporations, the consumers of utility services in other localities must eventually bear some of the cost of such local governments. Inequity arises, therefore, from two factors. First, in those areas where there is little or

no public service corporation property, the cost of local government must be borne in major part by the nonutility property owners. This results in higher assessment ratios, higher rates of levy, or both. Second, while having to bear the major portion of local government cost, these same consumers also bear, through rates charged for the services of utilities, some portion of the cost of government in localities fortunate enough to have located within their boundaries more public service corporation property onto which the tax burden can be shifted.

Trend of Assessment Ratios and Rates of Levy, Service Area Illustration

Figure 5 illustrates the trends in assessment ratios and rates of tax levy with which the public service corporations serving southwestern Virginia have been faced over the years. The decline in the assessment ratio, from 41.1 per cent, in 1936, to 18.9 per cent, in 1956, is coupled with the rapid rise in the average rate of levy, from \$1.87, in 1936, to \$3.57, in 1956. This same rise in the rate of levy has been imposed on all property, utility and nonutility alike; therefore, special notice should be given in Figure 5 to the comparison between the assessment ratios on nonutility property and the property of public service corporations. Here the discrepancy, and consequent discrimination, is more obvious.

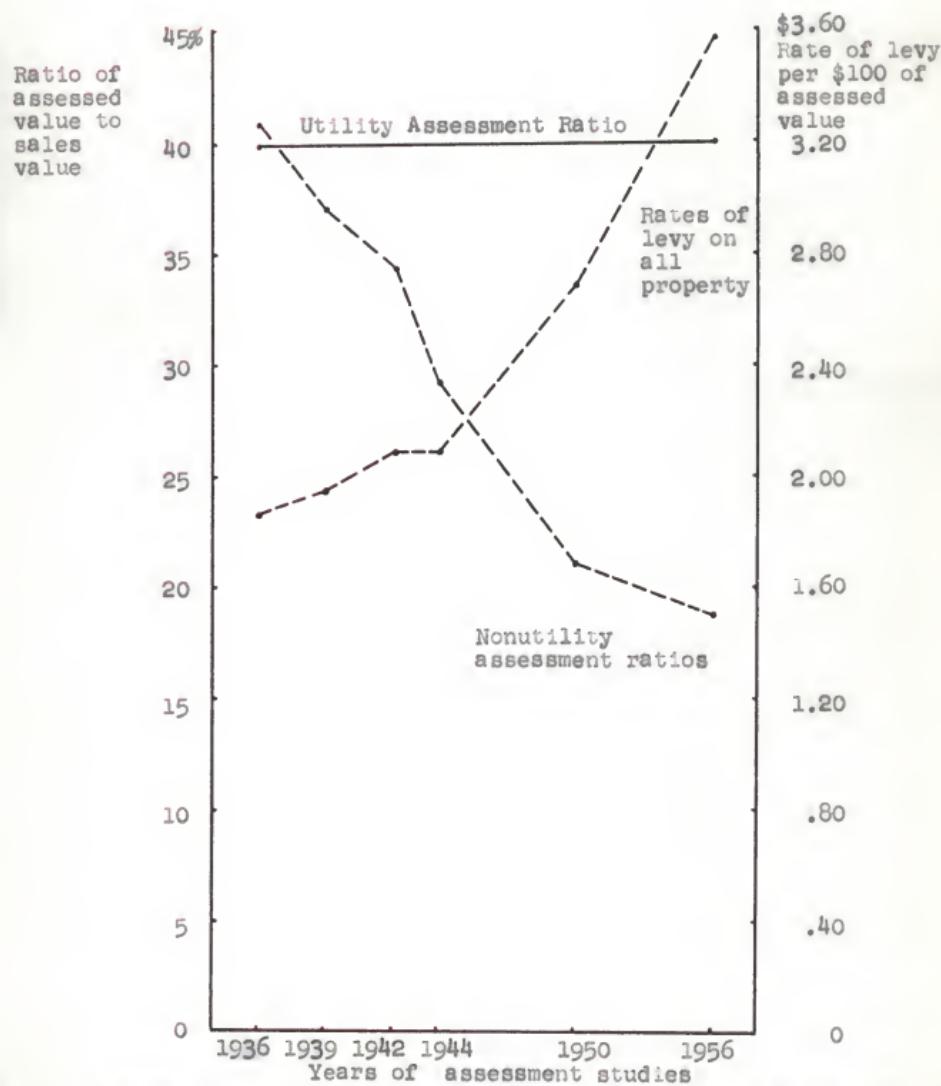


Figure 5. Comparison of assessment ratios and rates of levy on utility and nonutility property, service area of a southwestern Virginia power company, years of assessment studies, 1936-1956

Average Levies Per \$100 of "Full Value"

The following two tables, tables 18 and 19, have been constructed to show the average rate of levy on "full" rather than assessed values in the cities and counties served by a southwestern Virginia power company, and the cities and counties elsewhere in Virginia respectively. The assessed values, as shown by the Virginia Department of Taxation, were divided by the 1956 assessment ratio of each city and county to arrive at the full value. Then the actual taxes levied in each locality, again as provided by the Department of Taxation, were divided by this "full" value to determine the average levy rate, expressed in these tables as a weighted average rate for cities and counties.

Three things are to be noted upon examination of these tables. First, the average rate of levy per \$100 of full value increased almost 50 per cent more on public service corporation property than on nonutility real estate, from 1954 to 1958. The fact that taxes on public service corporation property increased more rapidly would not be disturbing if such property had been under-taxed before. Such was not the case, however, as may be seen in Table 18. Second, it is noteworthy that the cities, in both 1954 and 1958, had an average levy rate per \$100 of full value on nonutility real estate in excess of that imposed on public service corporations. This is explained by the fact that the higher populated areas have a greater need for revenues

TABLE 18

AVERAGE RATE OF LEVY PER \$100 OF "FULL" VALUE,
FOR THE YEARS 1954 AND 1958

Area Served by a Southwestern Virginia Power Company

	Nonutility Real Estate	Public Service Corporation Property
<u>1954</u>		
Counties	\$.45	\$.99
Cities	.89	.82
County-city average	\$.59	\$.95
<u>1958</u>		
Counties	\$.51	\$1.10
Cities	1.00	.88
County-city average	\$.66	\$1.05
Increase	\$.07	\$.10

Sources: Reports of the Department of Taxation to the Governor of Virginia, Fiscal Years Ending June 30, 1955 and 1959.

TABLE 19

AVERAGE RATE OF LEVY PER \$100 OF "FULL" VALUE,
FOR THE YEARS 1954 AND 1958

Counties and Cities Outside the Area of a
Southwestern Virginia Power Company

	Nonutility Real Estate	Public Service Corporation Property
<u>1954</u>		
Counties	\$.65	\$.83
Cities	1.14	.87
County-city average	\$.85	\$.85
<u>1958</u>		
Counties	\$.74	\$.97
Cities	1.11	.93
County-city average	\$.89	\$.95
Increase	\$.04	\$.10

Sources: Reports of the Department of Taxation to the Governor of Virginia, Fiscal Years Ending June 30, 1955 and 1959.

to support local government while being denied the advantage of having located within their boundaries sizeable investments of plant and equipment of public service corporations. A third factor is that the counties in this area, enjoying an effective tax rate on public service corporations more than twice that on nonutility real estate, in 1954, and sensing the need for additional investment on the part of public service corporations, not only maintained the discrepancy between effective rates but also widened it, increasing the effective rate on nonutility real estate but .06¢ while increasing the effective rate on public service corporation property almost twice as much, .11¢ per \$100 of assessed value.

To show that the situation existing in this area is not unique, Table 19 provides similar data for the counties and cities in Virginia outside of this particular service area. While the average rate of levy per \$100 of assessed value rose from .85¢ to .89¢ on nonutility property, from 1954 to 1958, it rose from .85¢ to .95¢ on utility property. Once again, due credit must be given to the cities, the average levy rate being reduced therein from \$1.14 to \$1.11 on nonutility property even though utility effective rates were increased from .87¢ to .93¢. This does not compare favorably with the counties' increase in nonutility rates, from .65¢ to .74¢, while increasing utility effective rates more, from .83¢ to .97¢. When

these increases are weighted, it is seen that the effective increase on public service corporations is more than twice that on nonutility property owners.

Average Levies on Assessed Valuations

Table 20 shows the movement of the real estate and public service corporation tax burdens, from 1954 to 1958. Included in this table are the assessed values, taxes actually levied, and the average rate of taxation obtained by dividing actual taxes levied by the assessed values and multiplying the result by 100 to convert the average tax rate to a rate per \$100 of assessed value. These data cover the entire state of Virginia although lack of sufficient data bars consideration of local levies imposed by incorporated towns for town purposes; however, it is not believed that such omission will materially affect the analysis or the conclusions derived therefrom due to the relative insignificance of assessed values of property located in the towns.

As to ordinary real estate, it should be noted that the total taxes levied thereon, in 1954, amounted to \$73,240,000 on assessed values aggregating \$2,863,671,000, the average rate of taxation per \$100 of assessed value being \$2.56. In 1958, the taxes levied on real estate amounted to \$105,937,000, the average rate of taxation being \$2.68 on assessed values totaling \$3,950,018. Thus,

TABLE 20

ASSESSED VALUES, TAXES LEVIED AND THE AVERAGE RATE OF TAXATION,
 COMMONWEALTH OF VIRGINIA
 (In millions of dollars)

	Counties	Cities	Aggregate	Average Tax Rate
<u>1954</u>				
Assessed values:				
Real estate	\$1,288,051	\$1,575,620	\$2,863,671	
Public service corporations	277,607	171,905	449,512	
Taxes levied:				
Real estate	60,027	13,213	73,240	\$2.56
Public service corporations	7,709	4,604	12,313	2.74
<u>1958</u>				
Assessed values:				
Real estate	\$1,773,182	\$2,176,836	\$3,950,018	
Public service corporations	393,955	224,137	618,092	
Taxes levied:				
Real estate	53,732	52,205	105,937	\$2.68
Public service corporations	12,459	6,457	18,916	3.06

Sources: Reports of the Department of Taxation to the Governor of Virginia, Fiscal Years Ending June 30, 1955 and 1959.

although total assessed values increased over \$1 billion, from 1954 to 1958, the average levy per each \$100 of this assessed value increased only .12¢.

On the other hand, the total taxes levied on public service corporation property, in 1954, amounted to \$12,313,000, the average rate of taxation being \$2.74 on assessed values totaling \$449,512,000. In 1958, the taxes levied on public service corporation property amounted to \$18,916,000 on assessed values aggregating \$618,092,000, the average rate being \$3.06 per \$100 of assessed value. This represents an increase in the average rate of taxation on public service corporation property of .31¢, or over two and a half times the increase in the average rate levied on real estate.

It is also to be noted that in each year the average rate of taxation on public service corporation property has been greater than the rate on real estate; further, the difference between these two average rates has widened from .18¢, in 1954, to .38¢, in 1958. There are at least two explanations for these differences. First, it is the practice in certain localities to classify considerable portions of public service corporation property which is usually considered to be real estate as personal property and to subject such property so classified to higher rates of taxation.¹⁷ That this practice is spreading is

¹⁷This subject is treated further in Chapter 6.

to some degree evidenced by the increasing spread between the average rates. Second, larger investments of public service corporation property exist, perhaps, in those localities with higher rates of levy (and lower assessment ratios), accounting therefore for part of the disparity between average rates. This is not to say, however, that the tendency exists for public service corporations to invest in high-rate localities but rather that those localities which are blessed with increasing public service corporation investment, with the attendant state assessment at 40 per cent of full value, have a propensity to raise rates and so increase the relative tax burden on public service corporations. Examination of similar data relative to one public service corporation located in that section of Virginia with notably low assessment ratios and high rates of levy, lends credence to the above explanation.

In 1954, the average rate of taxation on real estate in southwest Virginia was \$2.52 on an assessed valuation of \$523,354,000. By 1958, this rate had risen to \$2.80 on the increased assessed valuation of \$652,607,000. Thus, the increase amounted to 28¢ as compared with the statewide average rate increase of only .12¢, reflecting in part the tendency in southwest Virginia for localities to raise the rate of levy rather than adopt a revision in the assessment practice.

Table 21 shows that the average rate of taxation on public service corporations, in 1954, was \$2.96 on an assessed valuation of \$130,893,000, some 44¢ higher than that imposed on real estate, and .22¢ higher than the statewide average rate imposed on public service corporations. Further, by 1958, this rate had increased to \$3.29 per \$100 of assessed value, excluding any taxes levied by towns for town purposes. Thus, in 1958, the average rate imposed on utilities in southwest Virginia exceeded the rate imposed on real estate by .49¢ and exceeded the average rate on public service corporations throughout the entire state by .23¢. The disparity between the rates imposed on public service corporations serving southwest Virginia and those serving other localities is enlarged if one considers the fact that the statewide average rate of \$3.06, as shown in Table 20, includes southwest Virginia, while if this section is excluded the average rate throughout the rest of the state is only \$2.97. Thus it can be concluded that not only are public service corporations generally discriminated against but also that this discrimination is substantially more acute in southwest Virginia.

Summary

The degree of inequality in the assessment of various classes of property can be ascertained with a fair degree of accuracy by the technique of determining sales ratios,

TABLE 21

ASSESSED VALUES, TAXES LEVIED AND THE AVERAGE RATE OF TAXATION
 Service Area of One Southwestern Virginia Power Company
 (In millions of dollars)

	Counties	Cities	Aggregate	Average Tax Rate
<u>1954</u>				
Assessed values:				
Real estate	\$232,221	\$291,133	\$523,354	
Public service corporations	98,147	32,746	130,893	
Taxes levied:				
Real estate	7,161	6,052	13,213	\$2.52
Public service corporations	3,046	837	3,883	2.96
<u>1958</u>				
Assessed values:				
Real estate	\$292,950	\$359,657	\$652,607	
Public service corporations	136,265	37,029	173,294	
Taxes levied:				
Real estate	9,904	8,418	18,322	\$2.80
Public service corporations	4,685	1,022	5,707	3.29

Sources: Reports of the Department of Taxation to the Governor of Virginia, Fiscal Years Ending June 30, 1955 and 1959.

that is, the relation of the assessment to the selling price. In Virginia, this technique has revealed that sales ratios varied from a low of 6.5 per cent in one county to a high of 81 per cent in one city. Further, an inter-district comparison of these ratios revealed that all of the exceptionally low-ratio districts are located in the southwestern part of Virginia. This concentration of low-ratio districts in one geographical area has the result of inflicting discriminatory taxation on those public service corporations operating mainly or exclusively in that area.

Although assessment ratio studies are primarily of use in making inter-district comparisons, they can be of help in bringing to light variations in assessments that occur within assessing districts. Three localities examined in this study were shown to have unequal intra-district ratios which lead to discrimination between non-utility property owners as well as between public service companies and other property owners.

Of significance, also, in this examination of the assessment practice in Virginia, is the fact that assessment ratios have steadily declined over the years while the rates of levy have steadily risen. Since public utilities have continually been assessed at 40 per cent while the rate of taxation on this assessment has steadily risen, the effect has been to increase the effective rate of taxation on utility property relative to the effective

rate on nonutility property. Assessment administration and practice in Virginia having been examined for possible discriminations in the taxation of utility property, attention can now be directed toward the actual valuation and assessment of such public utility property in order to complete the picture.

CHAPTER 5

VALUATION, ASSESSMENT AND TAXATION OF PUBLIC SERVICE CORPORATION PROPERTY

In previous chapters attention has been directed toward assessment administration and practice, particularly as there might exist the possibility for inequitable administration of the assessment procedure in Virginia. It was found that nonutility property and utility property are assessed at varying ratios of "full value" and that because of this practical deficiency public service corporations are presently being discriminated against. It was noted, for example, that one utility serves an area in which the average assessment ratio is almost half that applied to its property.

This study is primarily concerned with discrimination against public utilities as a result of unequal assessment; however, it should be noted that unequal assessments are not the only means whereby utilities can be discriminated against. Thus far, this study has considered the lack of equality between the assessment of the full value of utility and nonutility property, with the attendant assumption that "full value" was either known or readily ascertainable. Although "full value" or "fair value" can be determined with reliability where there exists a market for the property in question, such value is not as easily

obtained for property for which there is no active market, as is the case for utility property. Accordingly, value for ad valorem tax purposes must be determined by some other means than the "willing buyer-willing seller" procedure.

In this determination of value for ad valorem tax purposes care must be exercised if further discrimination is to be avoided. As one economist points out, "Over-valuation can be fully as discriminatory as unequalized assessments."¹ Although this aspect of possible discrimination is not the major concern of this study, it is of such great importance that some consideration of reasonable evidences of value seems desirable. No attempt will be made, however, to completely evaluate the various evidences of value as to their discriminatory possibilities; rather, each shall be briefly considered and the evidence which is used in Virginia will be determined, all with the full realization that adequacy and reasonableness are subject to some question and that the possibility for discrimination exists in this area.

¹Roy L. Lassiter, Jr., "Reproduction Cost as a Basis for Ad Valorem Railroad Taxation," Public Utilities Fortnightly (October 26, 1961), p. 672.

The 'Ad Valorem System of Taxing
Utility Property

The advantages of assessing public service corporation property centrally under the "unit rule"² have been decidedly great, especially when compared with the deficiencies of piecemeal, local assessment. Further, assessing the entire utility as a single unit has the advantage of including the intangible elements of value, especially in those cases where apportionment is necessary between states. The major problem falls into the area of valuation and it seems important at this point to give this area some consideration.

Valuations of properties have come to mean different things to different people. Professor Glaeser has broken down the various meanings into the following categories:³

1. Valuation for taxation.
2. Valuation for public purchase under eminent domain or under charter and special franchise provisions.
3. Valuation in connection with validity of security issues.

²This rule means that instead of the property of a public utility being valued piece by piece, the company's entire value is appraised as a unit. Some problems are encountered in the case of utilities with property in two or more states; however, some basis for allocation between states can be used, an example of which is relative track mileage as used in the case of railroads.

³Martin G. Glaeser, Public Utilities in American Capitalism (New York: Macmillan Co., 1957), p. 273.

4. Valuation for accounting and insurance purposes and for private purchase and sale.

5. Valuation for rate making purposes.

Although this study is primarily concerned with the valuation of utility property for ad valorem tax purposes, the various evidences of value are frequently useful and used to satisfy more than one or all purposes.

The valuation of property has received, historically, more attention in the assessment of utility property and in the regulation of utility earnings than any other single factor. Although the famous Smyth v. Ames case of 1898 was concerned primarily with railroads, the decision was applicable to other kinds of public utility enterprises. At the time the decision was rendered it had little effect on utility taxation or regulation since there were few utilities, little regulation, and only nominal taxations; however, the effects of this decision grew paramount as both taxation and regulation of public utilities increased. In essence, the principle established in this decision was that the public is entitled to protection against unreasonable rates but that the utility, by the same token, is entitled to a fair rate of return for its services.

According to the United States Supreme Court:

The basis of all calculations as to the reasonableness of rates to be charged by a corporation maintaining a highway under

legislative sanction must be the fair value of the property being used by it for the convenience of the public. And in order to ascertain that value, the original cost of construction, the amount expended in permanent improvements, the amount and market value of its bonds and stock, the present as compared with the original cost of construction, the probable earning capacity of the property under particular rates prescribed by statute, and the sum required to meet operating expenses, are all matters for consideration, and are to be given such weight as may be just and right in each case. We do not say that there may not be other matters to be regarded in estimating the value of the property. What the company is entitled to ask is a fair return upon the value of that which it employs for the public convenience. On the other hand, what the public is entitled to demand is that no more be exacted from it for the use of a public highway than the services rendered by it are reasonably worth.⁴

This decision leads to two major questions. First, what is a fair valuation of property, either on which to base the return or to ascertain taxable values? Second, what is a fair rate of return? The problem of what constitutes a fair rate of return is beyond the scope of this study. In this study only the basis for the valuation of public utility properties will be considered.

Valuation of Utility Property

Among the more prominent methods advocated today are:

- (1) original cost less depreciation, (2) reproduction

⁴ Smyth v. Ames, 169 U.S. 466, 546 (1898). (Italics added.)

cost less depreciation, (3) capitalized income, and (4) market prices of stock and debt. These methods will be discussed in this order.

Original cost less depreciation

Initially, original cost was defined as the aggregate investment in the existing plant and equipment. Since the public utility industry grew by mergers, consolidations, and purchases of local firms, there appeared a vast difference between the "first" cost of acquisition and the cost when taken over by the parent company in one of these consolidations, mergers, or outright purchases. With the revisions of the accounting systems in the early thirties came the method of costing plant and equipment at its "initial-use" cost. The first use of this method was made by the Wisconsin Public Service Commission, in 1931, when it required each electric utility, in its system of accounts, to record all properties, subsequently constructed or purchased, at their cost as of the time the properties were first used in public service. A Fixed Capital Purchase Adjustment Account was provided to record the difference between the cost to the purchasing utility and the "initial-use" cost, thus excluding this excess cost from the valuation.⁵ This method, first

⁵Uniform System of Accounts for Class A Electric Utilities, P.U.R., 1932A 423, 430 (Wisconsin: November 24, 1931).

proposed in Wisconsin, became generally adopted around 1936. The Federal Power Commission, the Federal Communications Commission, and the National Association of Railroad and Utilities Commissioners all adopted accounting classification systems which required that plant and equipment subsequently acquired be recorded at its "original cost" in the uniform Account No. 100.1, Utility Plant in Service.⁶

The definition of original cost which was adopted by the FCC is similar to that adopted by the NARUC and the FPC. In part, the FCC said that original cost is:

... the actual money cost of (or the current money value of any consideration other than money exchanged for) property at the time it was first dedicated to the public use, whether by the accounting company or by a predecessor public utility.⁷

This general definition meant that any type of utility which acquired plant or equipment which had been previously used in public service must record it at its cost to the first company to use the facility for public service.

⁶ Uniform System of Accounts Prescribed for Public Utilities and Licensees, Federal Power Commission, dated June 16, 1936, effective January 1, 1937; Uniform System of Accounts for Telephone Companies, Federal Communications Commission, dated June 19, 1935, effective January 1, 1936; Uniform System of Accounts, NARUC, November 10, 1936.

⁷ Uniform System of Accounts for Telephone Companies, Federal Communications Commission, dated June 19, 1935, effective January 1, 1936.

Thus it was that, in both court decisions and accounting circles, original cost of plant and equipment to public utilities was not defined as "initial cost" until after the middle 1930's. The generally accepted theory prior to that time was, as stated by Paton and Stevenson, that:

... it is the function of the property accounts to show the actual investment of the owners, not the amount which the investment would have been if the property had been purchased elsewhere.⁸

Advantages of original cost less depreciation. There are certain advantages inherent in the use of the original cost standard of valuation. First, it measures accurately the investors' sacrifice and anticipations, in terms of dollars, at the time of investment. Presumably, funds are obtained to acquire plant and equipment, and these funds are entitled, according to both court decisions and economic custom, to a "fair rate of return." Of course, there is the risk that this return may eventually prove inadequate due to the decline in the value of the dollar; however, that was a risk assumed by bond and stock investors and should be little or no concern of the public. If the investor, for example, was willing to sacrifice \$10,000 for a return of 6 per cent per year, then the original cost of acquisition of properties with the \$10,000 should be the only basis for computing a fair rate of return to the investor. If he desired a return greater than 6 per cent, then the investor should not have invested

in the public utility, especially in the fixed income securities of that utility.

Thus, the chief advantage of the original cost less depreciation method lies in the fairness to the investor who desires a secure return on his investment. By virtue of the utility operating for the public benefit, the costs of capital should remain as low as possible, yet still provide adequate compensation for risks involved and for the use of capital. The utilities have found a way to keep this cost low and that is to provide secure returns. Where utility earnings are regulated on this basis it follows that the going-concern value, or fair market value for purposes of ad valorem taxation must correspond accordingly.

Other advantages of original cost include the ease in which the original cost theory can be supplied. Since the adoption of accounting records which show "original cost," such adoption having been effected in the middle 1930's, it has been relatively easy to maintain good accounting records on acquisitions, constructions, retirements, and permanent additions. Further, depreciation methods have been standardized and improved records maintained which adequately record the expiration of these asset costs. Since depreciation charges are, in the main, allowable in computing the "fair rate of return," accounting records will show from period to period, through additions and deductions, the valuation upon which the utility is

entitled to earn a fair return and above which it becomes inequitable to assess the utility for purposes of property taxation.

The advocates of the original cost basis, of which Virginia is an example, argue further that this basis of valuation eliminates any consideration of increases in the prices of labor and materials, a consideration of which would not only be out of proportion to the original investment but also would necessitate accounting records whose cost to maintain would be unreasonably high. They argue further that the use of this basis of valuation prevents a rate base which is higher because of increased property values resulting from factors beyond the control or plans of the utility, such as population growth, municipal school planning and street construction, and consumer living habits.

Disadvantages of original cost less depreciation. One of the chief complaints against the original cost less depreciation basis of ascertaining value has been in the past the problem of determining the original costs. The early public utility enterprises maintained inadequate records and, further, the growth of the public utility industry had taken place through such numerous combinations, sales, mergers, and other financial devices as to obscure in the process the records of the original cost of property when first put into use for public service.

However, on the whole, public utility properties today are not overly old and actual cost, even when not readily available, can be estimated accurately.⁹

Although depreciation methods have been standardized today so that the determination of depreciated original cost values for rate-making purposes is administratively simple, many appraisers of utility property are not convinced that this administrative procedure reasonably depicts actual value of utility property satisfactorily for ad valorem tax purposes. There are two factors to be considered in the computation of the proper deduction from original cost to ascertain value which are difficult to measure. One is the physical deterioration of the property, the measure of which would probably not find much general agreement. The other factor which should be considered, but which is as elusive as the measurement of physical deterioration, is economic obsolescence.

If general agreement could be reached on the measurement of both physical deterioration and economic obsolescence, original cost less depreciation would be more acceptable as an evidence of value, providing that yet another variable is held constant. Unfortunately, the value of the dollar has neither remained constant nor

⁹Eli Winston Clemens, Economics and Public Utilities (New York: Appleton-Century-Crofts, Inc., 1950), pp. 162-169.

have changes in the price level been of such insignificance as to negate consideration of the changes. However, this problem has not been given general consideration directly by regulatory agencies when establishing a rate base and it appears that for this reason there is some justification for largely ignoring such changes in ascertaining values for tax purposes.

Reproduction cost less depreciation

Reproduction cost, as so many other terms used in the field of accounting, and particularly in public utility accounting, has been defined in various ways. One definition of reproduction cost is that it is that cost which it would take to reproduce the property new, with no consideration given toward accumulated depreciation. In view of the fact that accumulated depreciation is not considered and the fact that prices for labor and materials have risen greatly since practically any prior date, this method of property valuation would provide a much higher base on which to base rates and, if it were followed, on which to base ad valorem taxation. Its practical use as a method of property valuation was halted, however, almost before it started, by a United States Supreme Court decision, in 1909, which recognized depreciation

as an existing and real item of consideration. The United States Supreme Court recognized depreciation by saying, in the Knoxville Water Company case:

A water plant begins to depreciate in value from the moment of its use. The company is not bound to see its property gradually waste, without making provision out of earnings for its replacement. It is entitled to see that from earnings the value of property invested is kept unimpaired, so that at the end of any given term of years the original investment remains as it was in the beginning. It is not only the right of the company to make such a provision but it is its duty to its bond and stockholders and in the case of a public service corporation, at least, its plain duty to the public.¹⁰

By recognizing depreciation, the United States Supreme Court thereby eliminated the use of reproduction cost new as a basis of property valuation. On this particular point, the Court said that:

. . . the cost of reproduction is one way of ascertaining the present value of a plant, but that test would lead to obviously incorrect results if the cost of reproduction is not diminished by the depreciation which has come from age and use.¹¹

The more common definition of reproduction cost as a tool in determining fair value is the one in which the reproduction cost is reduced by depreciation to the present date. The argument advanced for the use of this

¹⁰ Knoxville v. Knoxville Water Company, 212 U.S. 1, 13; 29 S. Ct. 148; 53 L. Ed. 371 (1909).

¹¹ Ibid.

computation, although it does not point out any inherent advantages in using this base, at least points out the discrepancies in using a valuation based on reproduction cost with no consideration of depreciation. If depreciation is properly recognized as an operating expense, the net operating revenue figure will be reduced at least by the amount of the depreciation charges, such amount appearing as an increase in the operating expenses. This depreciation charge does not usually result in a cash fund set aside, but rather will result in an increase in other net plant assets. Therefore, by including the additional investment from depreciation charges along with plant properties which have not been adjusted by an depreciation, the valuation on which taxes and rates are based would be increased erroneously by the amount of the depreciation.

One of the main arguments for the use of reproduction cost less physical deterioration and economic obsolescence allowances, at least for rate-making purposes, has been maintenance of purchasing power to investors. It is claimed that, were the price level to rise sharply and construction prices were to follow in the same manner, the investors in the public utility would suffer a considerable loss of purchasing power. The validity of this argument is based on equity financing; however, to the extent that firms do trade on their equity, there is a discrepancy in this argument. Consider, for example, Table 22, which shows that the common stockholders, alone, are the only

TABLE 22
 COMPARISON OF RATES OF RETURN TO BOND AND STOCKHOLDERS
 A Hypothetical Case

	Depreciated Original Cost	Depreciated Reproduction Cost
Rate base	\$10,000,000	\$20,000,000
Fair rate of return	600,000	600,000
Dollars of return		
Distributions:		
Bonds (\$5,000,000 @ 5%)	\$250,000	\$250,000
Preferred stock: (\$2,000,000 at 6%)	120,000	120,000
Total fixed return	<u>370,000</u>	<u>370,000</u>
Balance to common stockholders	\$ 230,000	\$ 830,000
Return to common stock- holders (\$3,000,000)	7.7%	27.7%

beneficiaries of the reproduction cost basis of property valuation in a period of rising prices. The purchasing power of the bond and preferred stockholders would be considerably less, assuming that the depreciated reproduction cost basis is indicative of changes in the general price level, and the purchasing power of the common stockholders would be considerably greater, their dollar income being almost 400 per cent greater.¹² By the same token, a period of falling prices will reduce the purchasing power of the common stockholders, if not eliminate it entirely. In the preceding example, for instance, were the price level to drop substantially, the "fair return" of 6 per cent on reproduction cost might yield just barely enough to pay the interest charges to bondholders, and might provide no return at all to the common stockholders. The only advantage accruing to bond and preferred stockholders in a period of rising price under the reproduction cost basis of property valuation would be the additional security afforded to the payment of their fixed rates of investment return.¹³

The basis of the argument for a cost of reproduction basis of public utility property valuation came as a

¹² This rate of change will be affected by the relative proportions of debt and equity capital within a given firm.

¹³ Clemens, op. cit., pp. 152-153.

result of the Smyth v. Ames case in which the United States Supreme Court considered numerous factors in arriving at the "fair return." Until this situation was further clarified by later court decisions, the main problem seemed to be whether reproduction cost or original cost should be taken as the starting point in arriving at the fair value on which to base rates and on which to base value for ad valorem tax purposes. Prior to the "recent era," reproduction cost, decreased by depreciation and increased by an allowance for working capital and "going-concern" value, was taken as the fair value for these purposes. This value varied with changing conditions and its determination resulted in many costly court cases, unduly prolonged proceedings, and decisions unsatisfactory to both the utilities and the public-representing commissions.

The procedure involved in applying the reproduction cost basis usually commences with an inventory of the properties actually used in public service. Upon establishing the properties to be considered the next step is to "reproduce" these properties by applying unit prices of material and labor to the component parts, such unit prices having been estimated by some means, the final acceptance of which in the past was often disputed by both the utilities and the commissions. Other controversies

have risen over the determination of the allowance for working capital and special allowances for "going-concern" value.¹⁴

Determination of value under these conditions often has proved less than satisfactory. The final determination would be a compromise, affording little protection for the public or the utility. In view of this controversy, the regulatory commissions and the courts began, in the mid-1930's, displaying a preference for a rate base which did not vary with the price level.¹⁵ In 1923, Justice Brandeis, in a dissenting opinion, said that the rate base, when using an original cost basis of property valuation,

. . . would be ascertained as a fact, not determined as a matter of opinion. It would not fluctuate with the market price of labor, or materials, or money. It would not change with hard times or shifting populations. It would not be distorted by the fickle and varying judgments of appraisers, commissions, or courts. It would, when once made in respect to any utility, be fixed, for all time, subject only to increases to represent additions to plant, after allowance for the depreciation included in the annual operating charges. The wild uncertainties of the present method of fixing

¹⁴ Emery Troxel, Economics of Public Utilities (New York: Rinehart and Company, 1947), pp. 267-272.

¹⁵ Due to the falling prices and depression conditions prevailing in the early and mid-thirties, the utilities themselves probably preferred a rate base of original cost and thus did not press for reproduction cost before regulatory commissions or in the courts.

the (value) under the so-called rule of Smyth v. Ames would be avoided; and likewise the fluctuations which introduce into the enterprise unnecessary elements of speculation, create useless expense, and impose upon the public a heavy, unnecessary burden.¹⁶

The change from reproduction cost to original cost as the more accepted basis of property valuations has come only after many years of turmoil and confusion. The change is a result partially of better accounting practices necessitated by the chaos of the depression years and also of the desires of regulatory commissions, both federal and state, to have some clear method of controlling, analyzing, and justifying rates. One eminent professor expressed the general feelings of the mid-1930's when he said:

The attempt to regulate rates by reference to a periodic or occasional reappraisal of properties has been tested long enough to confirm the worst fears of its critics. Unless its place is taken by some more promising scheme of . . . control, the days of private ownership under government regulation may be numbered.¹⁷

Although reproduction cost less depreciation may be useful in determining value for rate-making purposes, and

¹⁶ Southwest Bell Telephone Company v. United States, 262 U.S. 276, 306-307 (1923).

¹⁷ J. C. Bonbright, Valuation of Property (New York: McGraw-Hill Book Company, 1937), Vol. II, p. 1190.

may be useful as an evidence of value for ad valorem tax purposes, its use in either case must be made with some restraint. As expressed in one study:

The assessor's objective is to assess at a uniform percentage of value, not of cost. If reproduction cost is a good test of the value of nonutility property and a poor test of the value of utility property, it is obviously inequitable to insist that it be used as a test of value in both areas.¹⁸

Capitalized income

Another method frequently discussed for the determination of the value of a utility is the capitalization of operating revenues at some rate which is assumed to be reasonable. As Professor Glaeser points out, "The capital sum so derived is also clearly dependent upon the existing earning capacity, and in addition, upon the assumed capitalization rate."¹⁹ Thus, to endow this method with creditability necessitates the resolving of two major questions. First, what earnings are to be capitalized? Second, at what rate must these earnings be capitalized to most reasonably reflect current values?

As pointed out by the Committee on Unit Valuation of the National Association of Tax Administrators, "The

¹⁸ Committee on Unit Valuation, Appraisal of Railroad and Other Public Utility Property for Ad Valorem Tax Purposes (Chicago: Federation of Tax Administrators, June, 1954), p. 8.

¹⁹ Glaeser, op. cit., p. 282.

earnings that are to be capitalized, in pure appraisal theory, are the future earnings.²⁰ Here, however, the question arises as to just what the future earnings will be. In most cases a review of the past will provide some guide as to the future; however, should only the past year be used? Or should an average of some number of preceding years be used? Or should past activity be adjusted for such things as current expectations and tax methodology? Should operating income before or after taxes be capitalized? Should gross or net operating income be the amount capitalized? There appears to be no clear agreement in this matter. Dr. James W. Martin, as an illustration of one procedure, suggests that net operating income should be capitalized at 7.0 per cent, net operating income plus taxes should be capitalized at 9.5 per cent, gross operating revenue (for railroads in Dr. Martin's proposal) should be capitalized at 58.2 per cent, and these three should be given weights of 3, 2 and 5 respectively.²¹

The rate of capitalization is subject to similar controversy. In addition to the incomes and rates suggested by Dr. Martin, others have been suggested, each with equal

²⁰ Committee on Unit Valuation, op. cit., p. 4.

²¹ James W. Martin, "Obsolescence and the Assessment of Public Service Properties," Proceedings of the Fifty-Third Annual Conference on Taxation, National Tax Association, 1960, pp. 414-416.

vigor and conviction. The National Association of Tax Administrators, for example, derived a capitalization rate for electric power companies of 4.62 per cent by weighting stock prices according to dividends paid and earnings retained.

²² Another writer obtained a capitalization rate by dividing net income before bond interest by the collective value of all stocks and bonds.²³ Dr. Martin, in another report made to the National Tax Association, suggested that the rate of capitalization should be adjusted as between large and small companies, and that differences in the market values of securities resulting from dividend policy or from capitalization structures be considered.²⁴

Much research remains to be done in this area if many people are to be convinced that capitalization of earnings is a reliable evidence of value. As indicated earlier, it is beyond the scope of this study to resolve this problem; however, as one evidence of value this method does warrant some further consideration.

²² Committee on Unit Valuation, op. cit., p. 5.

²³ James C. Kenady, "A Fair Rate for Capitalization of Earnings," Proceedings of the Forty-Sixth Annual Conference on Taxation, National Tax Association, 1953, pp. 416-422.

²⁴ James W. Martin, "Deriving a Capitalization Rate by Statistical Analysis: A Progress Report," Proceedings of the Forty-Sixth Annual Conference on Taxation, National Tax Association, 1953, pp. 423-431.

Market prices of stock and debt

In keeping with the basic accounting equation that assets must equal the sum of liabilities and owners' equity, it is felt by some that the sum of the market prices of stock and debt represents the market value of assets. A report of the National Association of Tax Administrators states that ". . . it is the only way in which the assessor can objectively give consideration to the prospective earnings of a corporation."²⁵ On the other hand, Professor Glaeser points out that the market value of stock may well depend upon the quest for control of the company and that "the summation of the market value of securities is not a measure of the invested capital, and its use . . . is vitiated by the fact that its value depends upon the very income the reasonableness of which is being called into question."²⁶

Although there may be others, at least three difficulties in this procedure immediately present themselves. First, the "basic accounting equation" has never purported to show anything more than assets and their sources at cost. To attach to this equation any other meaning, such as evidence of value, could be misleading. Second, the market prices of stocks frequently reflect factors other

²⁵Committee on Unit Valuation, op. cit., p. 7.

²⁶Glaeser, op. cit., p. 282.

than anticipated earnings, many of which are not easily susceptible to analysis. Finally, market prices of securities are determined through the sale of a relatively small proportion of the total securities outstanding, and it might be questioned whether this reasonably reflects the value of the property which all securities outstanding represents. There does appear to be, however, more justification for using this method of determining value for ad valorem tax purposes than for rate-making purposes, and continued study of this method as an evidence of value may result in more general acceptance of it.

Assessment of Properties of
Public Utilities in Virginia²⁷

The laws of Virginia governing the assessment of the property of public service corporations for tax purposes are administered by the State Corporation Commission, a constitutional agency of the state having regulatory and administrative powers. This commission not only assesses the properties of utilities but also administers the laws regulating rates, services and financial structure. Public service corporations in Virginia are subjected to a dual system of taxation, the Commission being required to

²⁷The data presented in this section are based upon personal interviews with and materials supplied by Mr. Lee B. Younger, Assistant Director, Public Utilities Taxation, Virginia State Corporation Commission. The conclusions drawn similarly represent those of Mr. Younger. Further, there does not appear to be much open dissention from these views in Virginia. Date of interviews: July, 1960.

assess and tax the franchises of public utilities for state purposes and to assess their real and tangible personal property, except the rolling stock of public service corporations, for purposes of local ad valorem taxation.

Public utilities are rarely sold, and when sold in Virginia, the same original costs by accounts are entered on the acquiring company's books. The property of a public utility is used to generate revenue and the economic value of such income-producing property depends on how much income the property can produce. Since the State Corporation Commission regulates the income which the property of a public utility can produce, generally speaking about 6 per cent on the original cost less depreciation of its property, the property cannot be worth more than the original cost less depreciation, and represents the maximum value of the property to its owners, the stockholders, or to the purchaser of a public service corporation.

The property of public utilities is reported to the Commission by the companies annually on a reporting form designed to show the geographical distribution of property, showing particularly in what city, town or county and school district the property is located. These forms are further designed so that all property of the utility may be returned by classes as prescribed by the appropriate

section of the Code. For example, the classes of property required by statute to be reported separately for electric utilities are as follows:

- (a) Land and improvements
- (b) Generating and substation equipment
- (c) Transmission and distribution lines
- (d) Underground conduits, conductors and devices
- (e) Line transformers
- (f) Services
- (g) Meters
- (h) Street lighting and signal systems
- (i) General equipment
- (j) Material and supplies
- (k) Merchants capital
- (l) All other property not enumerated in any of the foregoing heads and whether used in public service operations or otherwise.

In addition to being designed to comply with the Statutes, the forms have been designed to conform to the plant accounts set forth in the Uniform System of Accounts for the various utilities which was adopted by the National Association of Railroad and Utilities Commissioners, in 1936, and prescribed by the Virginia State Corporation Commission, in 1937. This permits a ready comparison between values returned for assessment purposes and the amounts carried at depreciated original cost of the various classes of property on the books of the company and used in Virginia for rate-making purposes.

The components of construction cost considered for purposes of ad valorem taxation include contract work, labor, material and supplies, transportation, special machine and shop service, protections, injuries and damages, privileges and permits, rents, engineering and supervision, general administration, preliminary engineering, insurance, legal costs, taxes, interest during construction and all other expenses and overheads in connection with the addition of plant to the utility. The usual procedure in Virginia in making an appraisal of electric, telephone, gas or other public service corporations' property is to first make a physical inventory of the property and then to conduct a study of depreciation applicable thereto. This procedure has been facilitated by the requirement of the Virginia Commission that the accounts of utilities be set up on original cost in accordance with the Uniform System of Accounts.²⁸ This requirement, made in 1937, necessitated a physical inventory of utility property set up by taxing districts. Continuous property records, maintained by the utilities, through additions and retirements each year both as to quantities and costs, provide a perpetual inventory. Work orders issued by the utility show the tax district in which the work is done and these work orders are the means of keeping the continuous property records up to date.

²⁸ Uniform System of Accounts, NARUC, 1936.

One of the most important factors considered in determining the assessed value of utility property is depreciation. In this respect, the State Corporation Commission disregards the book reserves for depreciation or amortization and computes its own allowable depreciation for the various classes of property. In order to ascertain this, depreciation studies of two groups of public service corporation property are made. First, a study is made of the depreciation on individual major items of property such as structures and generating equipment. For the other group the depreciation is determined as an average figure applied to classes of property such as pole lines, open wire lines, transormers and meters. The depreciation studies consist of studies of company records and consideration of various depreciation methods such as Iowa tables, age dollar, and inspection of the physical property. The major public service corporation properties generally are maintained in a relatively stable condition. From these Commission studies and its experience over the years in assessing public service corporations, the Commission believes that the over-all depreciated value of a major utility will run about 80 per cent of original cost and the average age of most items of property will be approximately ten years.

These values so assessed by the State Corporation Commission are not taxed by the state for state purposes; rather, they are certified to the various localities for

local taxation. These local taxing districts, moreover, do not assess the other nonutility property at its full value but at varying fractions of its full value, as has been observed in an earlier chapter. Since Virginia law requires the local taxing units to tax property assessed by the State Corporation Commission at the same rate as other property in the taxing district, the Commission, in order to achieve equalization, has heretofore equalized the value ascertained by it at 40 per cent of full value. This practice, although it has been shown herein to be inadequate, at least is evidence that the Virginia State Corporation Commission is of the opinion that equality in taxation means equality in the burden of taxation in total, not mere equality of applied rates or of assessment.

Summary

In this chapter some discussion of the development of utility taxation and of the assessment practice, especially as it is applicable in Virginia, has been presented. Generally, the most pressing problem has been the determination of value where there is no active market. Unfortunately, there is no handy solution to this problem. As expressed in one report:

Value is a relative thing; there is no such thing as "intrinsic value." Value cannot be measured with the assurance of accuracy that we measure a pound, an hour, or a mile. Two or more assessors, equally competent and diligent, are likely to

differ in their assessment determinations. Yet the range of disagreement must be relatively small if each of the²⁹ divergent findings is to merit respect.

Among the evidences of value considered were original cost less depreciation, reproduction cost less depreciation, capitalization of earnings, and market prices of stock and debt. In addition to these evidences of value considered separately there exists the possibility of combining certain of them. One writer, for example, suggests that a reasonable indication of a utility's value would be 25 per cent consideration of capitalized earnings, 25 per cent consideration of market value of stock and debt, and 50 per cent consideration of cost data.³⁰

For purposes of this study, however, the controversy surrounding the various evidences of value appears unimportant. In Virginia, ad valorem value is ascertained by a consideration of depreciated original cost, and this method is apparently acceptable as reasonable to all parties concerned. Better evidences of value may exist, some of which were discussed in this chapter; however,

²⁹Committee on Unit Valuation, op. cit., p. 9.

³⁰Dean Ellis, "Problems in the Use of Stock and Debt and Income Factors in the Assessment of Telephone and Electric Utilities," Proceedings of the Fifty-Third Annual Conference on Taxation, National Tax Association, 1960, p. 401.

the method which presently exists in Virginia will be deemed acceptable for purposes of this study as long as no ready controversy is apparent.

There is no lack of controversy, however, in the allocation of assessed values, however determined, to the taxing districts. The classification of utility property into categories of realty and personality, for example, presents some problem, especially when different rates of taxation are imposed on these classes of property. This controversy is discussed in the following chapter.

CHAPTER 6

CLASSIFICATION AND TAXATION OF TANGIBLE PERSONAL PROPERTY

Property tax theory historically has accepted the tacit presumption that ownership of property is prima facie evidence of the capacity to pay taxes and, further, is a fair measure of both the benefits and protection afforded to the owner by government. Thus, the general theory has held that all property, real or personal, should bear a proportionate share of the cost of government.¹ That most property was homogeneous in nature was a reasonably accurate assumption during the early years of property tax theory and application. The country's economy was predominantly agrarian and society was relatively classless, there being a fairly equal distribution of wealth and income. However, as the economy developed into the more complex and interrelated segments characterizing today's society, the basic theory on which taxation of property rested veered sharply from the reality of economic facts. There developed strata of heterogeneous property, the result of which was exemption of certain classes from

¹Jens P. Jensen, Property Taxation in the United States (Chicago: University of Chicago Press, 1931), p. 7.

taxation, separate classification of certain property for taxation at different rates, and some substitution of other types of taxation for the property tax itself.

Directly as a result of these variable approaches to a scheme of taxation based on property ownership, tangible personal property is today not taxed universally and, where taxed, is subject to varying tax treatment according to the legislative and administrative desires of the state or locality. The extremes in the taxation of tangible personal property are presented by Illinois, where all types of personality are subject to taxation, and by Delaware, New York and Pennsylvania, where all types of personality are specifically exempted from ad valorem taxation.² Between these extremes are those states which entirely or largely exempt personal property not used in business pursuits or which specifically tax as personal property commercial and industrial inventories, agricultural implements, domestic animals and other types of personality. Where there are exemptions from taxation there must necessarily be some inequality between taxpayers in their relative tax burdens.

These legal inequalities leave the door open to economic inequities and might create more problems than

²U.S. Bureau of the Census, Taxable Property Values in the United States (1957 Census of Governments, Vol V, 1959), p. 4.

specific exemption of certain items solves. Thus, as the economy continues to develop and becomes more complex, additional exemptions, brought about by economic necessity or political expediency, may well tend to create more problems and perpetuate and multiply such inequities as already exist. A half century ago, when the economy had not yet reached the apex of development, if even today it has, one study of the problems of tangible personal property taxation concluded that such taxation was undesirable and inequitable ". . . due to the inherent defects of its theory; that even reasonably fair and effective administration is unattainable; and that attempts to strengthen such administration simply accentuate the inequities and unjust operation of the system."³

It is argued by some that taxation of tangible personal property is possessed of so many evils and inequities that, if it is at all possible to raise revenue in another way, taxation of this class of property should be abolished. Not only is taxation of tangible personal property difficult to administer, so the argument goes, but also it is an unsatisfactory means of measuring either the benefits derived from government or the ability of the taxpayer to

³Addresses and Proceedings of the Fourth International Conference, resolution adopted by the conference of the International Tax Association, Columbus, Ohio, 1910, p. 25.

pay.⁴ However, ownership of property, real or tangible, indicates some benefit received and some ability to pay which, if not measurable, are at least existent. Therefore, taxation of all property, real and personal, remains in most states.

The Relative Position of the Personal Property Tax

That many states have effected a trend away from the use of personality in the general property tax base, or have declined to include this component in the first place, is shown in Table 23. In addition to the three states which impose no tax on personality, five others place notably low dependence on the taxation of personality. In Maryland, for example, personal property comprises but 3.1 per cent of the total assessed values subject to taxation. Other states in which personal property makes up less than 10 per cent of the total assessed value subject to taxation include Massachusetts, New Hampshire, New Mexico and Tennessee. On the other hand, five states have locally assessed personality constituting one-third or more of the total, these states including Georgia, Mississippi, North Carolina, South Carolina and West Virginia. The greatest dependence is made by South Carolina in which personal property comprises 42.5 per cent of the total value subject to taxation.

⁴ Carl Shoup, et al., Facing the Tax Problem (New York: Twentieth Century Fund, Inc., 1937), pp. 411-412.

TABLE 23

ASSESSED VALUE OF PROPERTY SUBJECT TO LOCAL GENERAL PROPERTY TAXATION, 1956

State	Total ^a	Assessed Value Subject to Tax		Per Cent of Assessed Value Subject to Tax
		After Deduction of Exemptions	Personal property	
Alabama	\$ 2,260	\$ 597		26.4%
Arizona	1,239	269		21.7
Arkansas	934	257		27.5
California	21,819	3,460		15.9
Colorado	3,068	1,595		19.4
Connecticut	6,634	1,734		26.1
Delaware	928	---		---
District of Columbia	2,332	384		16.5
Florida	4,530	906		20.0
Georgia	2,238	855		36.6
Idaho	603	106		17.7
Illinois	28,609	5,451		19.0
Indiana	7,029	2,284		32.5
Iowa	4,607	687		14.9
Kansas	4,177	1,129		27.0
Kentucky	3,618	439		12.1
Louisiana	2,341	665		28.4
Maine	1,147	231		20.2
Maryland	6,719	209		3.1
Massachusetts	8,590	767		8.9
Michigan	14,531	4,429		30.5
Minnesota	2,009	401		19.9
Mississippi	1,006	356		33.4
Missouri	6,837	1,516		22.2
Montana	619	200		32.3
Nebraska	2,956	701		23.7
Nevada	585	105		18.0
New Hampshire	988	95		9.6

TABLE 23 (continued)

State	Total ^a	Assessed Value		Subject to Tax		Per Cent of Assessed Value Subject to Tax
		After Deduction of Exemptions	Personal property	Total	Personal property	
New Jersey	\$ 7,349	\$ 951	\$ 938	12.9	12.9	
New Mexico	35,287	68	---	7.2	7.2	
New York	6,479	2,160	2,160	33.3	33.3	
North Carolina	640	143	143	22.4	22.4	
North Dakota	22,071	5,124	5,124	23.2	23.2	
Ohio	2,008	430	430	21.4	21.4	
Oklahoma	2,051	401	401	19.6	19.6	
Oregon	11,951	---	---	---	---	
Pennsylvania	2,192	480	480	21.9	21.9	
Rhode Island	936	397	397	42.5	42.5	
South Carolina	1,930	536	536	27.8	27.8	
South Dakota	2,974	272	272	9.1	9.1	
Tennessee	10,553	2,722	2,722	25.8	25.8	
Texas	1,165	193	193	16.6	16.6	
Utah	429	70	70	16.3	16.3	
Vermont	5,024	1,014	1,014	20.2	20.2	
VIRGINIA	2,678	561	561	20.9	20.9	
Washington	3,401	1,237	1,237	38.3	38.3	
West Virginia	8,548	1,484	1,484	17.4	17.4	
Wisconsin	784	133	133	17.6	17.6	
Wyoming						
UNITED STATES TOTAL	\$272,444	\$47,188	\$47,188	17.4%	17.4%	

Source: U.S. Bureau of the Census, Taxable Property Values in the United States (1957) Census of Governments, Vol. V, 1959, p. 22, Table 2.

^a Amounts are expressed in millions of dollars. The value of wholly exempt property is omitted.

It is interesting to note the geographical dispersion of the per cents of total value subject to tax which personal property comprises. There is only one southern state, Kentucky, in which personal property is less than 17.4 per cent, the national average, of all assessed value subject to tax, while such states as California, Illinois, New York and Pennsylvania are examples of those which do fall in this category. To the extent that inequities are inherent in the imposition of tax upon personal property one might conclude that the more industrialized sections of the country have made greater progress in achieving equity in taxation. Though no ready explanation of this situation is available to defend cogently, it may be of value to note that in the southern states, which include a relatively large per cent of personal property in the assessed value subject to tax, the average percentage of public service corporation property in relation to the total is 10.2 per cent as compared with a nationwide average of only 4.9 per cent. Further, the assessed value of farm acreage is 16.0 per cent of the total as compared with a national average of only 13.9 per cent, and the assessed value of industrial property is only 7.1 per cent as compared with a nationwide average of 10.8 per cent.⁵

⁵U.S. Bureau of the Census, Taxable Property Values in the United States (1957 Census of Governments, Vol. V, 1959), p. 22, Table 2.

Real and Personal Property Defined

There are today some twenty-six states in which tangible personal property comprises 20 per cent or more of the value subject to taxation, Virginia being one of these states. In those states which have retained the tax, or in which heavy reliance upon personal property in the tax base is made, the definition of real property tends to be narrow while the definition of tangible personal property is more all-inclusive.

North Carolina

As an example of such definitions the North Carolina law is a case in point. In this state real property is defined as follows:

The terms "real property," "real estate," "land," "tract," or "lot" mean and include not only the land itself, but also all buildings, structures, improvements and permanent fixtures thereon, and all rights and privileges belonging in or in any wise appertaining thereto except where the same may be otherwise denominated by this subchapter or the Revenue Act.⁶

After defining intangible personal property in a similarly narrow fashion, tangible personal property is broadly defined as including "all other property."⁷ In North

⁶Section 105-272 (30), General Statutes of North Carolina.

⁷Section 105-272 (11), General Statutes of North Carolina.

Carolina, it should be noted, tangible personal property comprises some 33.3 per cent of the total assessed value subject to ad valorem taxation.⁸

New York

On the other hand, New York State, which expressly exempts personal property from taxation,⁹ attaches a much broader definition to real property. The entire provision of the New York law is worthy of presentation:

12. "Real property," "property" or "land" mean and include:

- (a) Land itself above and under water, including trees and undergrowth thereon and mines, minerals, quarries and fossils in and under the same, except mines belonging to the state;
- (b) Buildings and other articles and structures, substructures and superstructures erected upon, under or above the land, or affixed thereto, including bridges and wharves and piers and the value of the right to collect wharfage, craneage or dockage thereon, but shall not include bulk milk tanks or coolers installed upon a farm to hold milk awaiting shipment to market;
- (c) Surface, underground or elevated railroads, and railroad structures, substructures and superstructures, tracks and the metal thereon, branches, switches and other fixtures permitted or authorized to be made, laid or placed in, upon, above or under any public or private street or place;

⁸ See Table 23.

⁹ Section 300, Real Property Tax Law, Ch. 50-a, C.L., State of New York, provides: "Notwithstanding any provisions to this chapter or of any other general, special or local law to the contrary, personal property, whether tangible or intangible, shall not be liable to ad valorem taxation."

- (d) Telephone and telegraph lines, wires, poles and appurtenances; supports and inclosures for electrical conductors and any other appurtenances, upon, above and under ground;
- (e) Mains, pipes and tanks permitted or authorized to be made, laid or placed in, upon, above or under any public or private street or place for conducting steam, heat, water, oil, electricity or any property, substance, or product capable of transportation or conveyance therein or that is protected thereby;
- (f) Boilers, ventilating apparatus, elevators, plumbing, heating, lighting and power generating apparatus, shafting other than counter-shafting and equipment for the distribution of heat, light, power, gases and liquids, but shall not include movable machinery or equipment consisting of structure or erections to the operation of which machinery is essential, owned by a corporation taxable under article nine-a of the tax law, used for trade or manufacture and not essential for the support of the building, structure, or superstructure, and removable without material injury thereto;
- (g) Forms of housing adaptable to motivation by a power connected thereto, commonly called "trailers" or "mobile homes," which are or can be used for residential, business, commercial or office purposes, except those
 - (1) located within the boundaries of an assessing unit for less than sixty days or
 - (2) unoccupied and for sale. The value of any trailer or mobile home shall be included in the assessment of the land on which it is located; provided, however, that if either the trailer or mobile home or the land on which it is located is entitled to any exemption pursuant to article four of this chapter, such trailer or mobile home shall be separately assessed in the name of the owner thereof;

(h) Special franchises as defined in subdivision seventeen of this section.¹⁰

Effects in States Where Personality
Is Not Subject to Taxation

In New York, where the law spells out its intent to include particular items of property as real estate, there can exist little discrimination between taxpayers as a direct result of improper or arbitrary classification of property. Naturally there have been and no doubt will continue to be some borderline situations in which case some inequity may exist; however, many of the evils of arbitrary classification are eliminated under the scheme of taxation which exempts tangible personal property and which reasonably and adequately defines real property.

Effects in States Where Personality
Is Taxed

On the other hand, in those states where personal property is subject to taxation, many persons and businesses, including in particular public service corporations, suffer discrimination not only from the fact that such taxation exists even where classification of properties is reasonable and equitable, but also increasingly so as their properties are arbitrarily classified or as variances in the rates of taxation on real and personal property are introduced.

¹⁰Section 102, Real Property Tax Law, State of New York,
Ch. 50-a, C.L.

The mere fact that some segments of taxable values owned by individuals and nonutility companies escape the tax rolls places an added burden upon the public service corporations whose property is, by virtue of the requirements for reporting to regulatory commissions, a matter of public record. That no property of a public service corporation escapes the tax rolls is assured to the tax collectors while it is reasonable to assume, as discussed earlier, that some portion of individual and nonutility tangible personal property escapes taxation entirely either through omission or understated valuations.

The Problem of Determining Value of Tangible Personal Property

The determination of value for taxing purposes is one of the major problems facing local taxing authorities; moreover, it is the failure to determine value accurately and inclusively which places an inequitable burden upon those taxpayers whose property is fully valued and all of which is included in the tax base. Market value, as usually defined by most writers in this area, is the price-aggregate for property obtained from the bargaining of a willing buyer and a willing seller. Unfortunately, this standard is of little practical value to the taxing authorities where there are no willing buyers or sellers bargaining for property, where there is no normal or active market in which the determination of property values can be made.

This is most generally the case with public service corporation property, a fact which leaves value determination to administrative and judicial interpretation.

For this reason, the assessment goal is more popularly one of uniformity rather than assessment at full market value. Where assessment at market value is an unattainable objective and where uniformity in assessment is not achieved, inequities must exist, there being no other objective way of allocating the tax burden. That neither assessment at full market value nor uniformity of assessments is achieved, as has been shown to be the case in Virginia, appears to be the common complaint in most states and localities. Further, the evidence on which the above conclusion is drawn is most usually obtained from studies of real estate assessments.

Assessment procedure and practice as pertaining to tangible personal property can reasonably be inferred from the real estate studies; however, state and local efforts at equalization have been concentrated on real property, leaving inequities in assessments of personality untouched. In Virginia, the classification of much public service corporation property as personality, together with varying rates of taxation on realty and personality, places an unjust burden on these public service corporations.

States Where Realty and Personality
Are Taxed Alike

In the administration of a scheme of property taxation in which the same tax rates are applied to both real and tangible personal property, local assessment of properties and rates which vary between taxing districts have been the rule rather than any centralized system of taxation within the state. Further, as has been pointed out, few assessments have ever approached full market value even in those states where so required by their constitution. The practical result has been inequality between the various taxing districts as well as within the taxing district itself. In such a situation it is likely that assessments are "negotiated" to fit local needs and that favoritism exists. At any rate, the theoretical concept of uniformity and equity has not generally been followed. It is possible that the result of local classification, assessment and rate of levy would result universally in what a New Jersey Commission described as the case in that state some fifteen years ago. It reported that ". . . there is no discernible pattern in assessment practices as they apply to personal property or for that matter to any property in New Jersey."¹¹

¹¹Second Report of the New Jersey Commission on State Tax Policy, 1947, p. 7.

States Where Property Is Classified

Where property is differentiated by classes, and different rates of taxation are allowed by law, such as is the case in Virginia, the state is said to have adopted a "comprehensive classification" system. The underlying theory for classification and rate differentials apparently is a recognition of the heterogeneity of property. It is argued that the various classes of property are possessed of different earning powers and, therefore, should bear a share of the tax burden in some relation to the variable ability to generate income. Perhaps the most reasonable argument is that which attaches fiscal expediency to this scheme. Under any circumstances, however, where property is classified and subjected to varying rates of taxation, it becomes of paramount importance to adopt some system of proper and equitable classification.

The Classification of Public Service Corporation Property in Virginia

For purposes of this work it is necessary to limit consideration to Virginia's classification system as it particularly affects public service corporations. The inequities arising out of centralized assessment of utility properties as a separate class have already been examined. In this section only the results of local classification into categories of real and personal property are afforded consideration.

Classification by the Virginia
State Corporation Commission

In Virginia, the State Corporation Commission is the assessing body of public service corporation properties, although the real and tangible personal property of these corporations is specifically reserved to the taxing districts for purposes of local taxation. The assessments of electric utility properties, to illustrate the procedure as it is applied to public service corporations, are classified into the following categories:¹²

1. Value of land and improvements
2. Value of generating equipment, steam hydro, internal combustion
3. Value of station equipment, transmission and distribution
4. Value of overhead lines, transmission
5. Value of overhead lines, distribution
6. Value of underground conduit, conductors, and devices
7. Value of line transformers
8. Value of services
9. Value of meters
10. Value of installations and leased property on customers' premises
11. Value of street lighting and signal systems
12. Value of general plant equipment
13. Value of material and supplies.

¹²Statement Showing the Assessed Value of the Property of Electric Light and Power Corporations, State Corporation Commission of Virginia, 1959.

There is nothing to indicate, in the above classification system, however, which items are to be considered as real property and which are to be considered as personal property. This question is left to local taxing agencies which apply the appropriate local tax rate against each class of property as it might be classified by the locality; that is, into categories of real and personal property.

Basis for classification

To answer the question as to the extent property which is attached to land in such a fashion as to be thought of as a part of land is subject to real property taxation, certain tests have been developed in the Virginia courts.¹³ First is the test of "annexation" of the property to the realty. Although this test leaves some room for clarification, there is merit in considering annexation to mean much the same thing as "imbedded in," "built upon" or "permanently attached thereto." Second, the test of "adoption" is accorded great weight in the determination of whether property is realty or personality. Generally speaking, if equipment, for example, is essential to the function for which a building is used, the courts apparently will consider such equipment as realty, or at least

¹³ Danville Holding Corporation v. Clement, 178 Va. 223, 232, 16 S.E. 2d 345, 349 (1941).

this factor is one of those which must be considered. Finally, intent should be afforded strong consideration. One writer has suggested by means of generality that real property includes "improvements of such a permanent character as to achieve the attributes or characteristics of real estate."¹⁴ Unfortunately, no well-defined basis for classification has yet been established by either legislative or judicial action, although the above general guides have been helpful in individual cases. Because of the lack of any well-defined principles in this area and the provisions in Virginia law,¹⁵ local option exists as to the classification of public service corporation property as real or personal property.

The problem of public service corporations in Virginia

The problem of public service corporations in Virginia is manifested by two things. First, the State Corporation Commission makes no distinction between real and personal

¹⁴ William H. Sager, "Property Classification for Taxation," Virginia Law Review, Vol. 43, No. 8, December, 1957, p. 1329.

¹⁵ "The words 'lands,' 'land' and 'real estate' are defined to include lands, tenements and hereditaments, and all rights and appurtenances thereto and interests therein, other than a chattel interest." Va. Code Ann., Sec. 58-758, Supp. 1956. "However, the real estate of public service corporations is not assessed under the general provisions of the statute concerning real estate assessments." Va. Code Ann., Sec. 58-758, Supp. 1956.

property, classifying all property into the functional categories described earlier. In spite of a provision of Virginia law which provides that the State Corporation Commission report to the localities on the character of property subject to taxation,¹⁶ the Commission has declined to do so, leaving this decision to the localities. If the question as to whether property is real or personal is a proper question of the property's character, then the State Corporation Commission should make such a determination under the Virginia law.¹⁷

In fairness to the State Corporation Commission, however, it must be pointed out that its position is not without merit. If the Commission were to effect a mandatory segregation of its assessments into classes of real and personal property, this might result in increased utilization of rate differentials, the effect of which would be to promote discrimination in the taxing of public service corporations rather than to alleviate existing inequities.

The second factor which accentuates the problems of public service corporations in Virginia is the fact that, given the option, there is a natural tendency for local

¹⁶Section 58-612 of the Code of Virginia.

¹⁷This is the position taken by a staff of legal advisors to private utility interests in Virginia, per memorandum dated May 25, 1960.

assessors to classify all public service corporation property, except land and land improvements, as tangible personal property, or at least to so classify as much utility property as possible. This, of course, is to their distinct advantage in those areas which have adopted a higher rate of taxation on personal property than on real estate. Thus far this device has been concentrated in, though not limited to, the cities due to the pressing needs of cities for increased revenues, the natural result of urban population concentration; however, the potentiality of it "catching on" is great and warrants some additional consideration of its effects.

Practice in Virginia

All property, both real and personal, is subject to taxation in Virginia. Further, it is the practice in Virginia of some sixteen cities, eight towns and seven counties to charge variable rates on taxable property located in their territory.¹⁸ In all cases, except one, in which the tax rates are different for real and personal property, personality is taxed at a higher rate. The one exception, the Town of Cedar Bluff, has relatively little taxable property at all, thus rendering further consideration of this isolated exception of little importance. Of

¹⁸ Local Tax Rates, Tax Year 1959, Bulletin No. 109, The Department of Taxation, Commonwealth of Virginia.

far more importance, however, is the significance of variable rates generally as presently employed in the remaining tax districts.

The fact that there exist in these areas different tax rates on real estate and tangible personal property is not in itself illegal or inequitable. In fact, due to the inability of local assessors to have complete information of all tangible personal property located in their districts, through omission of items by taxpayers on their returns, undervaluations by taxpayers, and lack of sufficient technical assistance in local tax administration, it is understandable that a locality might charge a higher rate on tangible personal property to offset to some extent the effects of omission and undervaluation. Further, the Virginia Constitution does not prevent the establishment of separate rates of taxation. Such a procedure, also, does not violate the "uniformity" provisions as all taxpayers within the taxing district would be subject to the same rates of taxation on like property.

The inequity exists, however, in those cases in which there is classification of certain utility property, ordinarily and reasonably considered as real estate, as personal property and accordingly subjected to the higher rates. The most common practice in the case of electric light and power companies, for example, is to classify land and improvements on land as real estate while classifying all other property as personality. This

classification is the case in fourteen of the sixteen Virginia cities having variable rates, in each of the towns, and in five of the seven counties.¹⁹

Some evidence and discussion as to what should reasonably constitute real property for purposes of taxation has already been presented. However, in those cases where the rates of taxation on real estate and tangible personal property are identical, the classification of property between realty and personality is largely academic. As more and more taxing districts adopt a system of variable rates and as the amount of investment in these localities continues to grow, the importance of proper classification of property is greatly magnified.

In the preparation of tables 24 and 25, an investigation of the tax levy on both real and personal property of electric light and power companies in Virginia was undertaken for two periods, the tax years of 1949 and 1959, and in those localities only which had variable rates in

¹⁹The City of Bristol has a rate of taxation on tangible personal property which is 40¢ per \$100 of assessed valuation higher than imposed on real estate; however, this study has been limited to a consideration of the effects on taxpaying electric light and power companies only. Bristol is served by the Tennessee Valley Authority. The City of Martinsville, although having a higher rate on tangible personal property, has not employed it in the taxation of electric property located therein, continuing to apply the lower real estate rate. Two counties, Chesterfield and Orange, also have a higher rate on tangible personal property; however, they have classified sufficient electric property as real estate so as to eliminate any unreasonable levy which might otherwise be imposed on such electric property.

TABLE 24

COMPARISON OF ACTUAL TAX LEVY WITH LEVY BASED ON RECLASSIFICATION
ELECTRIC LIGHT AND POWER COMPANIES IN VIRGINIA, 1949²⁰

Localities With Different Rates On Real And Personal Property	Actual Taxes Levied On real personal estate			Tax Levy Based On Reclassification			Excess of Actual Taxes Over Taxes Based On Reclassi- fication		
	On tangible personal property	Total	Real estate	Tangible personal property	Total	Real estate	Tangible personal property	Total	
<u>Cities</u>									
Alexandria	\$30,904	\$102,692	\$133,596	\$107,418	\$19,223	\$126,641	\$6,955		
Danville	6	41	47	41	1	42	6		
Hopewell	214	6,376	6,590	3,756	1,764	5,520	1,070		
<u>Towns</u>									
Boykins	1	156	157	73	66	139	17		
Capron	—	28	28	5	15	20	8		
Warrenton	16	1,377	1,393	183	1,197	1,380	13		
<u>Counties</u>									
None	—	—	—	—	—	—	—	—	
<u>Totals</u>					\$141,811		\$133,742		
Total excess of actual taxes over taxes based on reclassification							\$8,069		

Sources: Local Tax Rates, Tax Year 1949, Bulletin No. 83, Department of Taxation, Commonwealth of Virginia. Statement Showing the Assessed Value of the Property of Electric Light and Power Corporations, State Corporation Commission, Commonwealth of Virginia, 1949.

²⁰ See Table 27 for basis of reclassification.

TABLE 25

 COMPARISON OF ACTUAL TAX LEVY WITH LEVY BASED ON RECLASSIFICATION
 ELECTRIC LIGHT AND POWER COMPANIES IN VIRGINIA, 1959

Cities	Actual Taxes			Reclassification Taxes			Excess of Actual Taxes
	Real estate	Tangible personal property	Total	Real estate	Tangible personal property	Total	
Alexandria	\$173,103	\$821,237	\$994,340	\$853,894	\$64,802	\$918,696	\$75,644
Colonial Heights	5	5,299	5,304	1,251	2,703	3,954	1,350
Danville	274	11,751	12,025	5,232	184	5,416	6,609
Falls Church	31	5,698	5,729	2,365	3,159	5,524	205
Hampton	17,359	113,619	130,978	63,482	44,824	108,336	22,642
Hopewell	560	22,299	22,859	11,806	8,069	19,875	2,984
Newport News	896	81,856	82,752	47,343	30,764	78,107	4,645
Norton	83	8,184	8,267	2,288	5,489	7,777	490
Portsmouth	744	41,096	41,840	23,927	15,594	39,521	2,319
Richmond	50,250	214,013	264,263	168,551	75,575	244,126	20,137
South Norfolk	526	12,393	12,191	6,808	4,947	11,755	1,164
Virginia Beach	1,476	17,707	19,183	5,667	10,468	16,135	3,048
Williamsburg	703	11,629	12,332	3,762	6,166	9,928	2,404
Winchester	664	11,596	12,260	2,836	8,339	11,175	1,085
Towns							
Abingdon	1,658	11,768	13,426	2,439	9,235	11,674	1,752
Boykins	--	422	422	169	211	380	42
Capron	--	315	315	85	102	187	128
Cedar Bluff	--	176	176	95	105	200	(24)
Kilmarnock	--	128	128	27	87	114	14
Stephens City	--	108	108	25	70	95	13
Tappahannock	--	774	774	89	396	485	289
Warrenton	44	745	789	331	441	772	17

TABLE 25 (continued)

Counties	Actual Taxes			Reclassification Taxes			Excess of Actual Taxes
	Real estate	Tangible personal property	Total	Real estate	Tangible personal property	Total	
Arlington	\$3,612	\$197,869	\$201,481	\$112,244	\$63,152	\$175,396	\$ 26,085
Essex	5	10,361	10,366	3,453	3,464	6,917	3,449
Henrico	1,146	123,250	124,396	51,216	50,649	101,865	22,531
Lancaster	13	9,813	9,825	4,167	3,515	7,682	2,144
Madison	813	11,714	15,527	8,223	6,025	14,248	1,272
Totals			\$2,002,785			\$1,800,340	
				Total excess of actual taxes paid over taxes payable under reclassification		\$202,445	

Sources: Local Tax Rates, Tax Year 1959, Bulletin 109, Virginia Department of Taxation. Statement Showing the Assessed Value of the Property of Electric Light and Power Corporations, Virginia State Corporation Commission, 1959.

existence. In each of the localities considered, the local assessor determined the value of land and improvements on land as real estate and assessed all other property as personalty.

Tables 26, 27, 28 and 29 show the rate of taxation applicable to each class of property for the same two periods. In addition, tables 26 and 28 show the actual classification of electric light and power property, and tables 27 and 28 show a suggested classification which included not only the values of land and improvements on land as real property but also the values of generating equipment, station equipment, transmission lines, distribution lines and underground equipment. It was felt that these items, under the guide of the principles mentioned heretofore for classification, should properly be so included as real property. Although under certain conditions some of the remaining items logically could be considered as real property, they generally are looked upon as tangible personal property. Therefore, these items, which include the values of line transformers, services, meters, installations and leased property on customers' premises, street lighting and signal systems, general plant equipment, and material and supplies, were so classed as personal property.

Data available for the year 1949 show that there were only three cities and three towns with different

TABLE 26

ACTUAL CLASSIFICATION OF ASSESSED VALUE OF ELECTRIC LIGHT AND
POWER COMPANIES IN VIRGINIA, LOCALITIES EMPLOYING VARIABLE
RATES ON REALTY AND PERSONALTY, 1949
(in millions of dollars)

	Real Estate	Tax Rate Per \$100	Tangible Personal Property	Tax Rate Per \$100
<u>CITIES</u>				
Alexandria	\$1,123,779	\$2.75	\$3,423,079	\$3.00
Danville	250	2.25	1,627	2.50
Hopewell	9,954	2.15	227,726	2.80
<u>TOWNS</u>				
Boykins	50	1.00	12,470	1.25
Capron	--	.40	2,812	1.00
Warrenton	856	1.85	68,850	2.00

Sources: Local Tax Rates, Tax Year 1949, Bulletin 83, Department of
Taxation, Commonwealth of Virginia. Report of the Department of Taxation,
Fiscal Year Ending June 30, 1950, Commonwealth of Virginia.

TABLE 27

SUGGESTED CLASSIFICATION OF ASSESSED VALUES OF ELECTRIC
LIGHT AND POWER COMPANIES IN VIRGINIA LOCALITIES
EMPLOYING VARIABLE RATES ON REALTY AND PERSONALITY, 1949
(In millions of dollars)

Real Estate	Cities	Towns	Capron	Warrenton
	Alexandria	Danville	Boykins	
Land and improvements	\$1,123,779	\$ 250	\$ 9,954	\$ 50
Generating equipment	2,399,987	--	119,217	4,292
Station equipment	264,412	--		--
Overhead lines:				1,624
Transmission	25,410	1,579	1,792	--
Distribution	88,981	--	43,717	2,937
Underground equipment	3,537	--	--	--
Total real estate	\$3,906,106	\$11,829	\$174,680	\$7,279
	<u>=====</u>	<u>=====</u>	<u>=====</u>	<u>=====</u>
Tangible personal property	\$ 640,752	\$ 48	\$ 63,000	\$ 5,241
	<u>=====</u>	<u>=====</u>	<u>=====</u>	<u>=====</u>

Sources: Local Tax Rates, Tax Year 1949, Bulletin 83, Department of Taxation, Commonwealth of Virginia. Report of the Department of Taxation, Fiscal Year Ending June 30, 1950, Commonwealth of Virginia.

TABLE 28

ACTUAL CLASSIFICATION OF ASSESSED VALUE OF ELECTRIC
 LIGHT AND POWER COMPANIES IN VIRGINIA AND RATES OF
 TAXATION PER \$100 OF ASSESSED VALUE LOCALITIES
 EMPLOYING VARIABLE RATES ON REALTY AND PERSONALITY, 1959

	Real Estate	Tax Rate	Tangible Personal Property	Tax Rate
<u>Cities</u>				
Alexandria	\$5,495,335	\$3.15	\$23,463,905	\$3.50
Colonial Heights	380	1.20	211,960	2.50
Danville	18,293	1.50	335,738	3.50
Falls Church	1,090	2.84	184,412	3.09
Hampton	631,251	2.75	2,771,193	4.10
Hopewell	22,864	2.45	719,337	3.10
Newport News	29,868	3.00	2,480,485	3.30
Norton	1,849	4.50	148,808	5.50
Portsmouth	29,750	2.50	1,494,396	2.75
Richmond	2,672,859	1.88	9,727,857	2.20
South Norfolk	22,667	2.32	450,662	2.75
Virginia Beach	53,683	2.75	372,774	4.75
Williamsburg	33,466	2.10	310,108	3.75
Winchester	44,274	1.50	515,398	2.25
<u>Towns</u>				
Abingdon	89,638	1.85	196,132	6.00
Boykins	--	1.00	33,794	1.25
Capron	220	.40	10,581	1.00
Cedar Bluff	--	1.35	17,573	1.00
Kilmarnock	128	.20	42,607	.30
Stephens City	--	.60	11,962	.90
Tappahannock	100	.35	51,609	1.50
Warrenton	2,589	1.70	41,392	1.80
<u>Counties</u>				
Arlington	102,032	3.54	4,507,261	4.39
Essex	270	1.75	296,027	3.50
Henrico	57,318	2.00	4,250,006	2.90
Lancaster	868	1.55	417,559	2.35
Madison	28,027	2.90	432,752	3.40

Sources: Local Tax Rates, Tax Year 1959, Bulletin 109, Department of Taxation, Commonwealth of Virginia. Report of the Department of Taxation, Fiscal Year Ending June 30, 1959, Commonwealth of Virginia.

TABLE 29

SUGGESTED CLASSIFICATION OF ASSESSED VALUE OF
 ELECTRIC LIGHT AND POWER COMPANIES IN
 VIRGINIA LOCALITIES EMPLOYING VARIABLE
 RATES ON REALTY AND PERSONALTY, 1959

	Land and Improvements	Generating Equipment	Station Equipment
<u>Cities</u>			
Alexandria	\$5,495,335	\$18,721,246	\$1,801,841
Colonial Heights	380	---	13,098
Danville	18,293	---	324,500
Falls Church	1,090	---	---
Hampton	631,251	146,338	903,201
Hopewell	22,864	---	263,224
Newport News	29,868	---	576,697
Norton	1,849	---	9,676
Portsmouth	29,750	---	297,856
Richmond	2,672,859	2,089,027	1,892,575
South Norfolk	22,667	---	77,382
Virginia Beach	53,683	---	67,797
Williamsburg	33,466	---	39,150
Winchester	44,274	---	97,144
<u>Towns</u>			
Abingdon	89,638	---	16,330
Boykins	---	---	9,015
Capron	220	---	2,828
Cedar Bluff	---	---	---
Kilmarnock	128	---	---
Stephens City	---	---	---
Tappahannock	100	---	10,128
Warrenton	2,589	---	---
<u>Counties</u>			
Arlington	102,032	---	995,118
Essex	270	14,500	11,355
Henrico	57,318	---	886,648
Lancaster	868	---	30,389
Madison	28,027	6,450	26,963

Sources: Local Tax Rates, Tax Year 1959, Bulletin 109, Department of Taxation, Commonwealth of Virginia. Report of the Department of Taxation, Fiscal Year Ending June 30, 1959, Commonwealth of Virginia.

TABLE 29 (extension)

Overhead Trans- mission	Lines Distrib- ution	Under- ground Equipment	Total Real Estate	Total Tangible Personal Property
\$ 44,123	\$ 452,812	\$ 592,398	\$27,107,755	\$1,851,485
---	90,739	---	104,217	108,123
5,993	---	---	348,786	5,245
13,129	69,054	---	83,273	102,229
81,511	540,721	5,430	2,308,454	1,093,990
7,847	187,960	---	481,895	260,306
367,282	601,101	3,150	1,578,098	932,255
6,196	33,130	---	50,851	29,806
---	413,393	216,085	957,084	567,062
56,168	1,195,600	1,059,241	8,965,470	3,435,246
9,684	165,291	18,425	293,449	179,880
---	84,015	591	206,086	220,371
---	57,354	49,166	179,136	164,438
2,994	44,655	---	189,047	370,625
471	25,419	---	131,858	153,912
---	7,927	---	16,942	16,852
---	3,450	---	6,498	4,303
---	6,881	166	7,047	10,526
---	13,482	---	13,610	29,125
524	3,621	---	4,145	7,817
---	15,072	---	25,300	26,409
---	16,870	---	19,459	24,522
44,471	800,821	1,228,306	3,170,748	1,438,545
93,830	77,363	---	197,318	98,979
377,390	1,225,752	13,713	2,560,821	1,746,503
---	225,404	12,200	268,861	149,566
16,155	205,964	---	283,559	177,220

rates of taxation on real and personal property; further, no county had at that time yet resorted to using varying their levy rates. In these localities only land and land improvements had been classified as real estate, the remaining functional classifications, as certified by the State Corporation Commission, being classified as tangible personal property. This resulted in an improper classification of certain electric properties as tangible personal property which generated but \$8,069 additional revenue, \$6,955 of which was obtained from the two electric light and power companies with taxable property located in Alexandria.²² This discrimination was wholly the result of classification of certain real estate as personal property. However, the amount was, in 1949, small enough to overlook, the total net difference between actual taxes and hypothetical taxes, \$8,069, representing only a small percentage of the total tax burden.

It is also significant to note that classification of certain electric properties as personal property, usually considered real estate in most localities, was more pronounced and had greater effect in the cities than in the towns so employing this device. Urbanization and the increased demands so imposed upon city government accounted for the search, and apparent solution, for additional revenues in

²²The companies so affected were the Virginia Electric and Power Company and the Potomac Electric Power Company.

these localities. The counties had not yet been as hard pressed for such additional revenue, nor had the towns, although a few had already commenced the practice. In the ensuing decade, however, and as demands for governmental services exceeded the wherewithal to pay for them, more and more localities, as indicated in Table 25, adopted this technique of classifying utility property in the large as personal property on which there was imposed a higher rate of taxation.

By 1959, the number of cities imposing different rates of taxation on realty and personalty had grown from three to fourteen, while the number of towns so doing had grown from three to eight. Further, five counties had adopted this practice, by 1959, where none had been using it, in 1949. Again, the classification of the major part of an electric light and power company's property as personal property resulted in an inequitable tax burden on these companies when compared with the taxes which would have been levied had this property been classified with reasonable regard to its nature. This reclassification of such property is shown in tables 27 and 29.

It should be noted that the excess of actual taxes paid, in 1959, by the electric light and power companies in Virginia, over those computed by proper classification of property amounted to \$202,445, an increase in this particular discrimination of some 2,409 per cent since

1949. This is partially accounted for by the increase in the number of localities employing this device; however, as is shown in Table 30, there has also been a more effective utilization of this method by those localities which had already adopted it.

Table 30 shows the differences between the rate of taxation imposed on real estate and that imposed on tangible personal property in each of the counties, cities and towns which, in 1959, imposed varying rates. Not only does this table show the increase in the number of localities using variable rates, from six in 1949, to twenty-seven in 1959, but also it shows that the average difference between these rates, .36¢ per \$100 of assessed value, in 1949, had risen to .88¢ by 1959.

Although the calculations presented in these tables show the existence of this particular inequity to electric light and power companies they do not show the total effect of the "rate of class discrimination" on the property of all public service corporations. Further, these calculations fail to disclose the intent of other cities, towns or counties to employ such a device in the future. As an example of the possible inequity to all public service corporations, if the "rate of class discrimination" were to be applied to the assessed values

TABLE 30
 "RATE OF CLASS DISCRIMINATION"^a TREND
 SELECTED YEARS, 1949-59

	1949	1952	1953	1955	1956	1957	1958	1959
<u>Cities</u>								
Alexandria	\$.25	\$.40	\$.25	\$.25	\$.25	\$.75	\$.75	\$.35
Colonial Heights	--	--	--	.25	.25	.80	1.30	1.30
Danville	.25	1.40	1.40	1.40	1.40	1.55	2.00	2.00
Falls Church	--	1.65	1.65	.25	.25	.25	.25	.25
Hampton	--	--	--	1.65	1.55	1.50	1.45	1.35
Hopewell	.65	.65	.65	.65	.65	.65	.65	.65
Newport News	--	--	.40	.15	.15	.25	.25	.30
Norton	--	--	--	--	1.00	1.00	1.00	1.00
Portsmouth	--	--	--	--	--	--	.25	.25
Richmond	--	--	--	.30	.32	.32	.32	.32
South Norfolk	--	--	.50	.25	.25	.35	.43	.43
Virginia Beach	--	--	2.37	2.37	2.37	1.75	2.00	2.00
Williamsburg	--	--	--	.25	.25	.10	1.35	1.65
Winchester	--	--	--	.75	.75	.75	.75	.75
<u>Towns</u>								
Abingdon	--	--	--	--	--	2.40	4.15	4.15
Boykins	.25	.25	.25	.25	.25	.25	.25	.25
Capron	.60	.60	.60	.60	.60	.60	.60	.60
Cedar Bluff	--	--	--	--	--	--	--	(.35)
Kilmarnock	--	--	--	--	--	.15	.15	.10
Stephens City	--	.30	.30	.30	.30	.30	.30	.30
Tappahannock	--	.75	.75	.75	.75	1.15	1.15	1.15
Warrenton	.15	.10	.10	.10	.10	.10	.10	.10
<u>Counties</u>								
Arlington	--	.29	.56	1.21	.99	1.05	.85	.85
Essex	--	--	--	--	--	1.75	1.75	1.75
Henrico	--	--	--	--	.70	.90	.90	.90
Lancaster	--	--	--	--	1.20	.80	.80	.80
Madison	--	--	--	--	.50	.50	.50	.50
Number of localities using variable rates	6	10	13	18	22	25	26	27
Average rate	\$.36	\$.88

Sources: Local Tax Rates, Bulletins 83, 89, 91, 95, 97, 99, 101 and 109, Department of Taxation, Commonwealth of Virginia.

^aThe excess, or spread, of the tax rate on personality over the rate on realty.

of all public service corporation properties, in 1958, the additional tax burden imposed on these utilities would have amounted to \$5,439,208.²³

The Personal Property Tax Solution
as Proposed by Utilities

There is considerable support, especially among the public service corporations, given to the argument that all utility property should be classified as real estate. This argument takes its roots in a study made by the Virginia State Corporation Commission, under Judge Epes, around 1927. As a result of this study the Commission came of the opinion that the "average ratio for Virginia of assessed value to actual value of property owned by individuals and ordinary business corporations is 40 per cent or greater."²⁴ It has been questioned that much value could have been attached in that study to a consideration of assessment ratios on tangible personal property; therefore, the "40 per cent rule" must have been based, either

²³ Derived by applying the existing average "rate of class discrimination" of .88¢ per \$100 of assessed value (see Table 29), against the assessed values of all public service corporation property as reported by the Virginia Department of Taxation for the tax year, 1958.

²⁴ Letter of September 17, 1927, from Judge Epes to M. L. Stanley, Vice-President of the Seaboard Airline Railway Co., quoted in a brief of counsel on behalf of intervenor Appalachian Power Company in City of Richmond v. Commonwealth of Virginia, Ex Re., & C and others (citation, p. 10).

in large part or in total, upon an examination of real estate assessments. Accordingly, since public service corporation property assessments are based upon a rule derived from real estate ratios, the public service corporations should be taxed at those rates applicable to real estate, and not at those rates imposed on tangible personal property. Not as a part of the argument itself but as a result of its implementation is the fact that taxation at the lower real estate rates would partially offset over-assessment of public service corporation property which obtains from the imposition of the 40 per cent rule to all utility property while nonutility personal property is generally assessed at a much lower ratio to full value, if it is assessed at all.

To the argument that all public service corporation property should be classified as real estate for purposes of taxation, it may be responded that such an assumption is not true, just in the same way that it has herein been argued that classification of certain public service corporation real property as tangible personal property is an improper classification. A more desirable solution would be, it seems, to correct the existing error rather than to offset its effects with another and equally glaring error.

The opponents of the personal property tax have confined themselves to a portrayal of its practical shortcomings and have offered weak solutions. No one has as

yet attempted to explore the deeper reasons why the personal property tax is unsuited to the present generation. The purpose of the following section, then, is to consider the practical defects of the personal property tax as a part of the general property tax.

Practical Defects of the Personal Property Tax

The practical defects of the personal property tax may be treated under five headings: lack of uniformity in assessment, lack of universality, incentive to dishonesty, regressivity, and double taxation.

Lack of uniformity

Much has already been said in an earlier chapter concerning the lack of uniformity in the assessment practice in Virginia, and of the practical effect on public service corporations. In the present chapter some attempt has been made to show the injustices arising where, by classification of certain utility property as personality, public service corporations are subjected to a separate and distinct type of lack of uniformity. As has been indicated, in most states constitutional or statutory provisions require assessment of property at its "fair cash value" and in all states it is expected that the valuation shall everywhere be made at a uniform rate. In Virginia, and presumably in most states, property is rarely assessed at the same ratio to full value or is it taxed at the same rate in any two contiguous counties. As between

localities such assessment practice leads to under-
valuations which give a fallacious view of the public
resources; as between individuals, and corporations, it
results in injustices. The first constitutional injunc-
tion, that of uniformity of taxation, is frequently
violated.

An escape from these evils has been sought in the
creation of boards of equalization. The equalization pro-
cedure in Virginia has been imperfectly successful for it
has been impossible for each assessment to be given the
comprehensive scrutiny equalization would require. Fur-
ther, even if staff and resources were available for
proper equalization it is doubtful that the desired goal
could be reached. As aptly expressed some seventy years
ago, the competition "between counties to reduce assess-
ments has not ceased and in all probability will not, as
long as assessors are elected, or selfishness be a passion
in the human breast."²⁵ Further, equalization proceedings
in Virginia are initiated by the taxpayer and it is
doubtful that many taxpayers know when they are inequit-
ably assessed, much less possess the ability to present
their position to a board of equalization.

²⁵ Report of the California State Board of Equaliza-
tion, 1885 and 1886, p. 4.

Lack of universality

There has been some failure in the efforts to tax all forms of property, in particular personal property, except where its existence and availability for taxation has been facilitated by statute. Personal property does not generally bear its just proportion of the tax burden; moreover, it is mainly in those localities where its extent and importance are the greatest that its assessment is the least. The taxation of personal property frequently is in inverse ratio to its quantity; the more it increases, the less it pays. The reason seems clear: so far as it is intangible, personal property escapes the scrutiny of the most vigilant assessor; so far as it is tangible, it can be purposely exempted or undervalued. The following data, relative to Virginia, substantiates these statements.

The total value of real estate in Virginia increased from \$1,872,862,498, in 1949, to \$4,166,518,806, in 1959,²⁶ an increase of 122.5 per cent. During this same period of time, the total value of personal property increased from \$451,683,093 to \$951,022,313, an increase of only 110.6 per cent. The total value of real estate in the City of Richmond, a highly urbanized area, increased from \$369,470,765, in 1949, to \$719,050,280, in 1959, an increase of 94.6 per cent, although the total value of personal

²⁶The data in this paragraph were obtained from the Report of the Department of Taxation to the Governor of Virginia for the fiscal years ending June 30, 1950 and June 30, 1960.

property increased only 79.6 per cent during this same period of time, from \$59,428,795 to \$106,763,750. The relative changes taking place in the City of Richmond appear more significant when compared with similar changes taking place in one of the rural localities. For example, in Washington County the total value of real estate increased 22.7 per cent, from \$5,929,890, in 1949, to \$7,275,550, in 1959, although the total value of personal property increased 94.7 per cent during this period, from \$987,395 to \$1,922,035.

These figures become more significant when it is remembered that in today's society the value of personal property exceeds that of real estate, as understood by the taxing power. Personal property includes the entire and increasing annual production of agriculture and industry, the mass of modern wealth devoted mainly to consumption. Available data indicate that the more differentiated the industry and the more predominant the personality, the less does the latter contribute; until, as in Virginia, realty pays 79.8 per cent and personality but 20.2 per cent of the total property tax; and in Virginia's largest city, Richmond, realty paid 83.4 per cent and personality only 16.6 per cent.²⁷ On the other hand, in Shenandoah

²⁷Taxable Property Values in the United States, 1957
Census of Governments, Bureau of the Census, U.S. Department of Commerce, Vol. V, Table 21, pp. 125-127.

County, a relatively rural locality where one would expect little wealth in the form of personal property, realty comprised 52.6 per cent of assessed values subject to tax while personalty comprised 47.4 per cent.²⁸

Incentive to dishonesty

Another feature of the tax on personal property is that many attempts to enforce the taxation of this class of property by more rigid methods result in evasion and deception. As has been indicated, in personal property tax returns, where taxpayers are required to fill out under oath details of every item of their property, the inducements to perjury are increased. The imposition of the personal property tax frequently is restricted to those who are not informed of the means of evasion, or, knowing the means, are restricted by a sense of honor from resorting to them. This fact was realized by a Cleveland Chamber of Commerce tax committee many years ago when it reported that:

... the existing system is productive of the gravest injustice; under its sanction, grievous wrongs are inflicted upon those least able to bear them; these laws are made the cover and excuse for the grossest oppression and injustice; above all and beyond all, they produce in the community a widespread demoralization; they induce perjury; they invite

²⁸Ibid.

concealment. The present system is a school of evasion and dishonesty. The attempt to enforce these laws is utterly idle.²⁹

Although the final report of the state tax study commission for West Virginia, in 1960, contains no indication of an awareness of the problem presented in this chapter, an earlier report concluded that "the payment of the tax on personalty is almost as voluntary and is considered pretty much in the same light as donations to the neighborhood church or Sunday-school."³⁰ Thus, it is concluded that there are discriminations in the personal property tax, particularly when one class of taxpayer, the public service corporation, is faced with enforced disclosure of all of its property.

Reggressivity

Taxes are progressive when their increase is more than proportionate to the increase in the value of the property or the income taxed, or when the rate itself increases with the increase in the value of the property. Taxes are regressive when the effective rate increases as the value of the property or the income decreases. The general property tax in its practical effects is often regressive, and is even more so when the tax on personal

²⁹ Report of the Special Committee on Taxation, Cleveland Chamber of Commerce, 1895, p. 10.

³⁰ Preliminary Report of the Tax Commission, State of West Virginia, 1884, p. 10.

property is levied generally on those who already stand on the tax assessor's books as liable to the tax on realty. Two illustrations of this point serve in defense of this assertion. First, public service corporations, by virtue of the requirements for reporting their property as imposed by the Virginia State Corporation Commission, are effectively limited as to the amount of personal property which may be withheld from the tax assessor's rolls. Second, many localities offer their citizenry the privilege of reporting their personal property as a flat percentage of their real property, ostensibly to avoid the complications and annoyances of preparing a list of personality.³¹

Double taxation

Double taxation is of various kinds; however, there is one form which is particularly applicable to the property tax, namely that of debt exemption. It is maintained that, in determining the values subject to taxation, an allowance should be made for all indebtedness, whether mortgage debt on real property or general liability on personal property. Persons should be taxed on what they own and not on what they owe, for to tax both borrower and lender is double taxation.

³¹Roanoke City provides an example. Here a taxpayer may either list his personal property or arbitrarily assume its value for tax purposes to 10 per cent of the value of his real estate.

Summary

The taxation of personal property stems from the desire to make the general property tax equitable by including not only the real property but also other forms of property. The attempt is intelligible and even laudable for it represents the manifestation of the ideas of equity and universality of taxation. Personal property must not escape; therefore, it must be included in the designation of general property and taxed along with real property.

Although the attempt is laudable it is also futile. Personality will evade the most inquisitorial assessor; consequently, the general property tax resolves itself into a real property tax. Historically, the property tax has been a collective tax imposed upon the landowner; however, as soon as society became more complex and property was split up into various kinds and in many hands, the single property tax became more inequitable and less valuable, for the attempt to include under one tax the gains flowing from widely different pursuits and the attempt to reduce the multiform to the uniform has ended in the exemption of many new forms of property and a consequent overburdening of the old. The next step in history was to recognize the practical inadequacies of reducing heterogeneous properties to a common denominator and to adjust the theories of taxation to the economic facts. Thus, as property is divided into its various elements, governments have proceeded to impose new taxes,

not on the property but on the separate sources of this new wealth. It is for this reason that some governments have initiated taxes on income, on sales, and on franchises, all of which are attempts to achieve the equity in taxation which disappeared when taxable property became more than just real property.

In this chapter the effects of the personal property tax as administered in Virginia, especially on public service corporations, have been discussed. Based upon these data, it appears that the administration of the personal property tax has resulted in some discrimination. A review of the general theory of the personal property tax reveals that not only is there some discrimination of utilities because of questionable classification, but also that the tax on personal property is universally possessed of certain deficiencies.

Although there are certain defects in this scheme of taxation, as there are in the whole scheme of general property taxation, there are at the same time the advantages of relative ease of collection and fulfillment of the needs of local government. These factors, plus political considerations, make the complete abolition of the property tax on the local level extremely doubtful; however, reforms in the taxing process can make the ad valorem tax system more palatable and more equitable.

There is evidence now of the evolution of modern tax commissions encouraging and assisting an improved

assessment practice at the county and local level. This trend has, at least in the larger urban centers, improved real estate valuation practices for assessment purposes. In one of the cities in Virginia, for example, the treasurer has stated that he feels ". . . Virginia needs some definite reform in its assessing and taxing practices. The present situation is one in which certain localities, in addition to raising their own revenues for local purposes, are also paying the taxes of other less responsible localities through the media of both state assessments and utility rates."³² This same local official went on to advise that a ". . . major step in the right direction would be a more realistic assessment of local property, at least upward to the same level at which our public service corporations are assessed."³³

Thus, to many who believe that the property tax is here to stay but who realize the need for reforms, the problem of assessments is paramount. These persons seek to achieve the optimum result where each assessment, above all, will be uniform. Although the property tax has remained as the principal source of revenue to the local governments, it has undergone evolution. Further, there

³² Johnny H. Johnson, Treasurer, City of Roanoke, Virginia, address delivered to the Local Government Officials' Conference at the University of Virginia, Charlottesville, Virginia, August 30, 1960.

³³ Ibid.

is some indication that this change has not been in the unit taxed, but rather in the assessment practice. To the extent that the assessment practice continues to be improved to a point of equity and uniformity, many of the objections to this system of taxation will be overcome.

However, as imperfect as the existing system of taxation might be, and as ideal as the recommendations for change might be, practical obstacles are encountered in any attempt at reform. As expressed by one writer:

... in few fields are economic principles more distorted by the realities of practical politics than in the field of taxation. Any equitable readjustment of a tax system will be opposed by the political groups profiting from the existing system. Politicians from a rural area containing a concentration of utility property will oppose redistribution of tax receipts on any but a property situs basis. . . . In taxation, as in regulation, as in public ownership, as in all government, abstract principles of policy give way to practical considerations of politics.³⁴

Having examined some of the problems involved in the taxation of public service corporations, and realizing the practical limitations of any radical reform, this study can now turn to possible reasonable alternatives to achieving greater equity in utility ad valorem taxation. The following chapters will consider possible alternatives which maintain elements of the ad valorem tax system,

³⁴Clemens, op. cit., p. 547.

under the notion that "an old tax is a good one," while introducing measures which might lead toward lessening the discrimination of public utilities under the ad valorem tax system as it exists in Virginia today.

CHAPTER 7

REFORMS IN THE TAXATION OF PUBLIC SERVICE CORPORATIONS, PART I

In previous chapters the lack of uniformity which obtains from widely varying assessment ratios in the various localities and some of the practical defects of the ad valorem tax system were discussed. In Virginia, though property tax assessments for public service corporations are made by the State Corporation Commission annually at 40 per cent of "fair market value," assessments on real estate of non-public service corporations and local taxpayers are made differently in the various counties and cities of the state. It is thus desirable to seek some plan which will bring about uniformity in taxation between centrally assessed public service property and property locally assessed and taxed.

A further major problem in connection with ad valorem taxation stems from the multiplicity and relatively small size of the local taxing districts. Such homogeneity as these local taxing districts once possessed becomes diminished as large industrial plants and public service corporations locate their plants therein. The investment of such large amounts of capital, under the present system, greatly enriches the tax base in these localities, although the

plant workers themselves often locate in other localities, bringing the burden of education and other public services with them. Thus, the differences between taxable resources and governmental costs create considerable revenue difficulties. The problem is further compounded when it is realized that the tax burden, to the extent that it falls on the consumer, may well rest on a locality which is neither that in which the utility's property is located nor that in which the utility's employees reside.

Aside from the complete elimination of the ad valorem tax system and a substitution therefor of a tax based entirely on productivity, the route of reform can take three directions. First, is a greater equalization in the assessment practice. To the extent that this is impossible or impractical, the second broad method of achieving needed reform takes the assessed value of centrally assessed property, namely that of the public service corporations, and reallocates such assessed values back to the localities for taxation on some basis or bases which may be deemed more equitable than situs. The third alternative involves centralized assessment with centralized taxation, the revenues so realized to be redistributed to the localities on some equitable basis which considers productivity as well as situs.

Elimination of the Present Ad Valorem
Tax System on Public Utilities

There are two possibilities in this respect. First, if it is accepted that the public service industry is already close, by way of current taxes on income and the franchise tax, to being taxed mainly on productivity, and if it is felt that equity can be better achieved by taxing such corporations entirely on the basis of productivity, then a departure from ad valorem taxation in favor of local taxes on revenues would not be untenable. The second possibility involves removal of public service corporation property from the local tax roles, transferring the taxation of this class of property to the state. Both of these possibilities will be given brief consideration.

Local taxation on the basis of
productivity

This method would impose a flat rate of taxation on the operating income of the public service corporation, and the revenues so obtained by this means of taxation would be distributed to the various localities on the basis of their relative contribution to the operating revenues of the company. This overcomes the inequity which exists when the expenditures made by a company to render service to the consumers in locality A in tax revenue redound almost exclusively to the benefit of locality B. It does not, however, make allowance for the increased governmental costs of locality A as a result of the location of the utility's

property and employees, to the extent they reside in locality A. This cost may or may not have any relation to the revenues generated within that locality; in any case, this method ignores that consideration.

Table 31 illustrates how this method would operate. In 1959, the total taxes paid to city and county governments by one public service corporation studied amounted to \$2,523,160. The total operating revenues generated by these localities amounted in that year to \$40,684,802. This indicates an effective rate of taxation of approximately 6.2 per cent. Since the goal in this study is to examine more equitable means of distributing the tax burden rather than a reduction per se of utility taxes, the 6.2 per cent rate of taxation can be retained. Thus, it is only the distribution of the \$2,523,160 which would be affected by this method.

Russell County, in which substantial generating equipment is located, received 23 per cent of the company's total taxes paid to cities and counties although it contributed only 3.2 per cent of total operating revenues. At the other extreme, Roanoke City generated 13.8 per cent of the total operating revenues while receiving only 4.8 per cent of the total taxes. To the extent that the incidence of taxation has been shifted to the consumer of electric power, the citizens of those localities which do not generate a substantial portion of the company's revenues

TABLE 31

LOCAL TAXATION BASED ON REVENUE GENERATED ONE ELECTRIC
POWER COMPANY, STATE OF VIRGINIA, 1959

Localities Cities	Per Cent of Revenue Generated ^a (\$40,684,802)	Taxes Based on Percentages (\$2,523,160)		Actual Taxes 1959 (\$2,523,160)	Potential Loss to Localities	Potential Gain to Localities
		Localities	Percentages (\$2,523,160)			
Danville	3.03%	\$76,679	\$12,025	\$4	---	\$64,654
Ga. Lax	1.350	\$34,063	\$14,813	\$4	---	\$19,250
Lynchburg	8.564	\$216,083	\$72,901	\$4	---	\$143,182
Martinsville	1.454	\$36,687	\$3,145	\$4	---	\$33,542
Radford	.873	\$22,027	\$241	\$4	---	\$21,786
Roanoke	13.821	\$348,726	\$121,095	\$4	---	\$227,631
Counties						
Albemarle	.874	22,052	13,333	\$4	---	\$8,719
Amherst	1.528	38,554	29,432	\$4	---	\$9,122
Appomattox	.001	25	12	\$4	---	\$13
Bedford	2.845	71,784	32,353	\$4	---	\$39,431
Bland	.467	11,783	19,588	\$4	---	---
Botetourt	2.525	63,710	25,385	\$4	---	\$38,325
Buckman	4.023	101,507	39,727	\$4	---	\$61,780
Buckingham	.001	25	808	\$4	---	---
Campbell	1.559	39,336	16,030	\$4	---	\$23,306
Carroll	4.024	101,532	93,682	\$4	---	\$7,850
Craig	.147	3,709	1,341	\$4	---	2,368
Dickenson	2.247	56,695	67,577	\$4	---	---
Floyd	.891	22,481	22,864	\$4	384	---
Fluvanna	.019	479	78	\$4	---	\$401
Franklin	2.637	66,536	58,950	\$4	---	\$7,586
Giles	1.991	50,236	523,001	\$4	765	---
Grayson	1.559	39,336	39,776	\$4	440	---
Henry	4.524					\$51,459

TABLE 31 (continued)

Localities Counties (continued)	Per Cent of Revenue Generated ^a (\$40,684,802)	Taxes Based on Percentages (\$2,523,160)	ACTUAL TAXES 1959 (\$2,523,160)	Potential Loss to Localities	Potential Gain to Localities
Montgomery	2.492%	\$ 62,877	\$ 40,892	\$ 40,892	\$ 21,985
Nelson	1.999	25,206	8,726	8,726	16,480
Patrick	1.595	40,244	23,243	23,243	17,001
Pittsylvania	1.290	7,317	6,973	6,973	344
Pulaski	3.344	84,374	155,390	155,390	---
Roanoke	7.036	177,531	49,601	49,601	127,930
Russell	3.202	80,792	581,130	581,130	---
Scott	2.135	53,869	67,663	67,663	---
Smyth	8.266	208,265	71,677	71,677	136,688
Tazewell	4.180	105,168	68,587	68,587	36,881
Washington	2.558	64,542	122,404	122,404	---
Wise	2.509	12,813	10,374	10,374	2,469
Wythe	2.431	61,333	45,652	45,652	15,686
Totals	100.000%	\$2,523,160	\$2,523,160	\$1,136,069	\$1,136,069

^a See Appendix B for detailed composition of local revenues generated.

^b Actual taxes paid in 1959 obtained from company records.

are being subsidized at the expense of the remainder of the company's customers.

Table 31 also shows that if the total taxes paid by the company, in 1959, were to be distributed to the localities solely on the basis of revenues generated, each city served and over two-thirds of the thirty-one counties would have received more tax revenue. Of the ten counties whose revenue would decline, the losses of two counties would account for over 85 per cent of gain to all the counties and cities combined. Further, some portion of the loss in revenues which would be sustained by the remaining eight counties under this method of allocating taxes to localities is accounted for by the imposition of higher levy rates on classified personal property of the power company. If that inequity were corrected, the potential losses in revenues as shown in Table 31, would be considerably less and, in fact, could result in gains to some of those localities calculated to show a loss.

The revenues obtained by the public service corporation illustrated derive from one main source, the sale of electric power. All of the cities served by this company, and twenty-one of the thirty-one counties, purchased over 81 per cent of the power generated, while participating in only \$922,958 of tax revenue paid by this company out of a total of \$2,523,160, or but a little over 36 per cent.

This method of allocating taxes to the localities on the basis of revenues generated therein, though overcoming the defect of taxation on the basis of situs, does not appear to be the best solution. It presupposes that taxation on the basis of revenues is equitable and that taxation on the basis of situs is not. Situs taxation has been seen to have its inequities; however, it does not follow that relative revenue allocation is equitable. For example, one county may have within its boundaries certain manufacturing concerns which consume huge quantities of electric power. The plants may require few employees or their employees may actually reside in other taxing districts, thus reducing the need for many government services in the locality in which the plants are located. Granting that locality a large share of the tax revenue simply because of the consumption of electric power is as unsatisfactory as the present ad valorem method.

Taxation of public service corporations reserved for the state

Under this method, the state would completely depart from the ad valorem system and would impose instead a tax on the income of public service corporations. The revenue so obtained would then go to the state treasury and there would be no allocation to the individual taxing districts, either of assessed values subject to local taxation or of the income taxes collected centrally. The loss of

this revenue would spell disaster to certain counties and other taxing districts unless some other provisions are made. Two provisions are suggested under such a scheme.

State responsibility for instructional salaries. It has been estimated that the cost of instructional salaries in Virginia, for fiscal year 1962, would amount to approximately \$81 million at both the highest uniform scale of salaries and with the largest increase in teacher positions which could conceivably come about.¹ At the present time, state supplements to the localities come nowhere near paying the full cost of instructional salaries which are neither uniform throughout the state nor competitive with other states. In order to achieve the desired improvement in Virginia's educational program it is felt by many that both general increases in the rate of compensation for teachers and more uniformity in these rates is necessary. Further, this goal can be obtained, it is believed, by means of state financial support.

If the responsibility for instructional salaries, then, is transferred to the state government while at the same time both segregating public service corporation taxes to the state and also discontinuing all state supplements for school purposes to the localities whether or not such

¹Virginia Department of Education, staff studies conducted in 1960.

supplements had been earmarked for teacher salaries, the loss in revenue would be only minor to the various localities. Due to the lack of sufficient comparative data, only the effect upon counties, in 1959, was considered; however, most changes in factual data since that year have been largely proportionate and would not affect relative comparisons to any great extent. Further, there is reason to believe that an analysis of the effects upon cities would yield similar results, although it is probable that the loss in revenues would be relatively less in comparison with the reduction in school costs than is found in the county analysis.

A comparison of state supplements for school purposes in Virginia with the instructional salary burden² and the taxes paid by public service corporations³ reveals that the loss in net revenues, occasioned by eliminating local taxation of utility concerns and all state supplements together with the assumption by the state of the instructional salary burden, would accrue to only twenty-six of the ninety-eight counties in Virginia, and in most of these twenty-six counties the loss would not be large. The fact that these computations were based on an elimination of all

²Auditor's Report of Public Accounts, Comparative Cost of Local Government, Year Ending June 30, 1959. Commonwealth of Virginia.

³Report of the Virginia Department of Taxation, 1959.

state supplements for school purposes should also be considered. If state supplements were reduced by the amount specifically designated for instructional salaries, the number of counties showing a net loss and the amount of net loss both would be considerably reduced.

It was noted in making this analysis that of the twenty-six counties showing a net loss, twenty-two of them have assessment ratios less than the statewide average for all counties of 22.3 per cent, and twenty-four of them derive from local sources a percentage of total revenue which is lower than the statewide average of 54.55 per cent. This indicates that inadequate local effort is being made by the citizens in those counties which would be adversely affected by such a proposal. This is illustrated by an examination of the condition which has developed in Russell County, Virginia, the one which would have suffered the greatest loss by implementation of this plan in 1959, \$427,955.

Table 32 shows the trend in local effort made in Russell County, from 1936 to 1956, under an assumed investment of \$50 million, in 1936. Had the taxing authorities in Russell County maintained a constant local effort over the years, keeping the assessment ratio at 29.4 per cent, as well as maintaining the rate of levy at \$3.60 per \$100 of assessed value, and also reflected net appreciation of 100 per cent, the tax levy, for 1956, would have amounted to \$1,058,400, or \$790,650 more than the 1956 tax levy shown in Table 3. Projecting this same computation to 1958, and allowing for

TABLE 32

RATIO OF ASSESSMENT ON REAL ESTATE, TAX RATE, AND TAX LEVY UNDER ASSUMED CONDITION OF \$50 MILLION INVESTMENT CASTLEWOOD DISTRICT, RUSSELL COUNTY, VIRGINIA, 1936 TO 1956

Year	Assessment Ratio	Investment	Assessed Value	Rate of Levy	Tax Levy
1936	29.4% ^a	\$50,000,000	\$14,700,000	\$3.60	\$529,200
1939	25.2 ^b	50,000,000	12,600,000	3.70	466,200
1942	21.2 ^c	50,000,000	10,600,000	3.90	413,400
1944	21.05 ^d	50,000,000	10,525,000	3.50	368,375
1950	11.0 ^e	50,000,000	5,500,000	5.00	275,000
1956	8.5 ^f	50,000,000	4,250,000	6.30	267,750

^a Report of the Virginia Department of Taxation, 1936.

^b Report of the Virginia Department of Taxation, 1939.

^c Study made by Dr. Russell, op. cit., 1942.

^d Study made by Dr. Stauffer, op. cit., 1944.

^e Virginia Department of Taxation study, 1950.

^f Virginia Department of Taxation study, 1956.

an increase in the price level recognized by local assessors of only 33 1/3 per cent instead of 100 per cent, assessed value would have amounted to \$19,600,000 and the tax levy \$705,600, or \$437,850 more than the levy shown as computed in Table 32. Moreover, the assumed investment of \$50 million is unrealistic, there being an even greater probability of growth since 1936, although this is not reflected in assessed values due to the sharp decline in the assessment ratio. By exerting more local effort, then, counties such as Russell County could have funds made available which would offset any loss which might accrue as a result of this plan.

Though this plan would relieve the state government of a substantial cost in the form of local supplements, it would place upon the state the added burden of instructional salaries. This burden probably could not be borne with only the addition of public service corporation taxes to the state treasury.

State sales tax. Though the sales tax, as a percentage of income, falls more heavily on persons with small incomes, imposes heavy compliance and administration costs, is politically unpopular, and is generally considered a nuisance to everyone concerned with its payment and collection, it has proven to be highly adequate in yield, stability and certainty. All of the states surrounding or near Virginia make use of the sales tax and were able to generate substantial revenues therefrom, as shown in Table 33.

TABLE 33
COMPARATIVE SALES TAXES FOR STATES SURROUNDING
VIRGINIA, 1960

State	Rate	Yield
Maryland	3%	\$44,226,000
North Carolina	3%	73,296,920
Ohio	3%	222,018,657
Pennsylvania	4%	203,093,140
South Carolina	3%	53,960,214
Tennessee	3%	91,575,457
West Virginia	2%	31,170,022

Source: West Virginia Taxes, Report of the State Tax Study Commission, Charleston, West Virginia, November, 1960, Table VII, pp. 66-67.

The Virginia Department of Taxation has estimated that a 3 per cent sales and use tax would, in fiscal year 1962, generate some \$97 million, or \$16 million more than the projected requirements for instructional salaries. With a sales and use tax tied directly or indirectly to an improvement in the educational system in Virginia, the state could afford to relieve the localities of this responsibility. In turn, the localities could afford to relinquish both public service corporation taxes and state supplements previously designated for schools purposes.

However, it would be exceedingly difficult to inaugurate such a plan. First, the counties which would suffer some net loss in revenue are predominantly agrarian, and not only would it seem reasonable to assume a benign state attitude toward the real or imaginary farm problem but also it should be noted that the rural areas presently have control of the Virginia legislature. Second, the proposal depends upon the assumption by the state of the cost of instructional salaries and, concurrently, the imposition of a sales and use tax. Just as many people are reluctant to accept federal aid for schools for fear of federal control, so will many state citizens be reluctant to accept state aid in this form, for fear of control from Richmond. Finally, a sales and use tax is politically unpopular enough, and if tied to public education improvement in a state undergoing a sociological upheaval, would be even more unpopular. In the absence of the sales and other taxes, the political situation demands consideration of alternative actions to achieve more fairness in taxation.

Keeping the Ad Valorem System of Taxation

It has been observed that state taxation of public service corporations without local participation in the proceeds might be politically unpopular and, consequently, difficult to achieve. Further, it has been observed that taxation on the basis of productivity alone has its limitations, although a desire to achieve equity in taxation seems

to dictate a departure from the existing system of ad valorem taxation. However, since equity in taxation has been proven to be, in the words of one authority, "an elusive mistress, whom perhaps it is only worth the while of philosophers to pursue ardently and politicians to watch warily,"⁴ perhaps greater emphasis should be placed on an ideal of fairness.⁵ To this end it seems alternatively possible to improve the existing system. Three broad areas in this report are to be herein considered. The first is perhaps, the more practical and involves some means of achieving greater equalization in the present assessment practices. Considered second is the possibility of centralized assessment of public service corporations and allocation of assessed values to the various taxing districts on a more equitable basis than the present method of situs. Finally, following the recommendations of a Virginia State Chamber of Commerce report of 1945, in which it was stated that centralization, while desirable, ". . . must be accompanied by well-designed techniques for sharing centrally collected taxes with the smaller government units . . ."⁶ consideration will be

⁴ R. M. Haig, "Taxation," Encyclopedia of the Social Sciences, Vol. XIV, p. 540.

⁵ Attempts to define equity in terms of equality of sacrifice or of least aggregate sacrifice on the part of all tax-payers have been given up as unworkable. See Haig, op. cit., p. 539.

⁶ Opportunities for the Improvement of the Virginia State Tax Structure, Report of the Committee on Taxation and Government of the Virginia State Chamber of Commerce, 1945, p. 25.

afforded the notion of centralized assessment and taxation of public service corporations, with reallocation of funds so collected back to the various localities on some equitable basis.

Greater equalization in the assessment practice

There are two basic methods of equalizing the assessments on public service corporation property with those on non-utility property. One is to lower the assessment ratio on utility property to that on nonutility property.⁷ This is the easier method to apply administratively, and the one usually followed by the courts when they grant relief to a particular taxpayer. However, the sounder method is to raise the assessment ratio on nonutility property, toward the goal of assessing all property, including public service corporation property, at full value. This is a time-consuming process which may require reappraisals of all property.

Reducing the assessment ratio on public service corporation property. Reducing the assessment ratio on public service corporation property to some more equitable ratio can take three possible directions. First, the central assessment ratio imposed could be the same as exists in each county and city in which the utility property is located.

⁷ Delaware, Lackawanna & Western Railroad Co. v. Neeld, 23 N.J. 561 (1957).

Second, the utility assessment ratio could be that average assessment ratio which prevails in a particular utility's operating area. Third, the assessment ratio could be the average assessment ratio prevailing throughout the entire state, which is presently considerably below the 40 per cent ratio as now applied to public service corporation property.

Local ratios. A logical method, and in fairness to the consumers of the services of a particular utility, is the assessment of that utility's property in the same ratio as nonutility property locally assessed. Table 34 illustrates the effect on one public service corporation of such a procedure. The total amount of taxes which would have been paid, in 1959, under such a plan would have been \$881,214, or \$1,641,948 less than actually were paid. Such a plan has three essential defects. First, it does not equalize the burden of taxation between the consumers of electricity as served by the utility in question, although it does penalize those citizens residing in localities with low assessment ratios. Second, it does not equalize the tax burden of all consumers of electric power within the state, since the assessment ratios may be entirely different between the various sections of the state. Third, it does not equalize the burden between the various public service corporations operating in the state, especially to the extent that such taxes cannot be shifted and must be borne by the company.

TABLE 34

TAXES COMPUTED USING RATIO IN EACH LOCALITY SERVED, 1959
By A Southwestern Virginia Power Company

Localities	Fair Market Value of the Utility's Property	Local Assess-ment Ratio	Assessed Value Based on Local Ratio	Aver-age Tax Rate	Local Amount of Tax	Taxes Actually Paid	Net Decrease or (Increase) in Taxes	
							\$	\$
Cities								
Darville	\$ 885,078	66.0%	\$ 584,151	\$ 3.40	\$ 19,861	\$ 12,015	\$ (7,836)	
Galax	617,228	14.2	87,646	6.00	51,259	14,813	9,554	
Lynchburg	6,394,863	46.8	2,992,796	2.85	85,295	72,901	{ 12,394 }	
Martinsville	424,965	40.7	172,961	1.85	3,200	3,145	{ 55 }	
Radford	26,833	32.0	8,587	2.25	193	241	48	
Roanoke	10,889,878	33.4	3,637,219	2.78	101,115	121,096	19,981	
Counties								
Albemarle	877,185	12.1	106,139	3.80	4,033	13,333	9,300	
Amherst	1,988,645	14.1	280,399	3.70	10,936	29,432	18,496	
Appomattox	1,150	23.2	267	2.50	7	12	5	
Bedford	2,837,925	16.3	462,988	2.05	13,184	32,353	19,169	
Bland	1,050,040	13.3	139,655	4.66	6,508	19,588	13,080	
Botetourt	1,586,555	14.9	236,397	4.00	9,456	25,385	15,929	
Buchanan	2,837,628	11.3	320,652	3.50	11,223	39,727	28,504	
Buckingham	96,185	27.3	26,355	2.10	553	808	255	
Campbell	1,335,865	20.6	275,188	3.00	8,256	16,030	7,774	
Carroll	5,384,048	8.4	452,260	4.35	19,673	93,682	74,009	
Craig	101,610	21.3	21,643	3.30	714	1,341	627	
Dickenson	2,815,695	10.0	281,570	2.00	16,894	67,577	50,683	
Floyd	1,633,248	21.9	357,681	3.50	12,519	22,865	10,346	
Fluvanna	9,755	17.9	1,746	2.00	35	78	443	
Franklin	3,827,948	13.1	501,461	3.85	19,305	58,950	39,644	
Giles	38,455,983	13.4	5,153,102	3.40	175,205	523,001	347,796	
Grayson	1,663,205	8.5	141,432	5.98	8,458	39,776	31,318	
Henry	4,477,885	11.0	492,567	3.50	17,240	62,690	45,450	
Montgomery	2,779,880	13.3	369,724	3.68	13,606	40,893	27,287	

TABLE 34 (continued)

Localities Counties (continued)	Fair Market Value of the Property	Local Assess- ment Ratio	Assessed Value Based on Local Ratio	Aver- age Local Tax ^b Rate	Amount of Tax	Taxes Actually Paid	Net Decrease or (In- crease in Taxes
Nelson	\$ 765,465	24.6%	\$ 188,304	\$ 2.85	\$ 5,367	\$ 8,726	\$ 3,359
Patrick	1,936,923	15.8	306,034	3.00	9,181	23,243	14,062
Pittsylvania	1,871,575	20.5	178,613	2.00	3,573	6,973	3,400
Pulaski	9,960,873	13.8	1,374,600	3.90	53,609	155,390	101,781
Roanoke	5,511,205	26.4	1,454,958	2.25	32,737	49,601	16,864
Russell	51,886,585	8.5	4,410,360	2.80	123,490	581,130	457,640
Scott	2,916,523	8.5	247,904	5.80	14,378	67,663	53,285
Smyth	4,364,283	8.3	362,235	4.11	14,888	71,677	56,789
Tazewell	3,511,338	11.2	393,270	4.88	19,192	68,587	49,395
Washington	3,803,228	6.5	247,210	8.05	19,900	122,404	102,504
Wise	2,551,105	15.5	85,421	4.71	4,023	10,374	6,351
Wythe	2,853,243	15.9	453,666	4.00	18,147	45,652	27,505
Totals	\$181,932,366		\$26,806,821		\$881,214	\$2,523,162	\$1,641,948

^a Real estate assessment ratios for 1956 are used for this computation.

^b These rates computed by means of a weighted average (real estate and personal property assessments divided into tax levies on same).

Operating area ratios. Another variation would be to assess the property of a public service corporation at the average assessment ratio on nonutility real estate in the utility's entire operating area. Table 35 illustrates this procedure. It is noticed that the difference in tax which would be paid amounts to \$1,059,645, or approximately a 40 per cent reduction in the taxes actually paid in 1959. This has the advantage of equalizing the burden within an operating area; however, it does not equalize such burden between either the remaining consumers of the utility's service throughout the state, or does it equalize the burden between the public service corporations themselves.

It is notable that the two counties which have the bulk of this company's operating property located therein, Russell and Giles counties, would stand to lose a total of \$463,735 in revenues, or 43.8 per cent of all revenue lost to the counties, while all of the cities, predominantly urban areas and the largest consumers of electric power, would stand to lose but \$94,166 in revenue, or less than 9 per cent of the total loss.

Statewide assessment ratios. A more simple method would be for the State Corporation Commission to change the assessment ratio on nonutility real estate, about 31.5 per cent in 1956, the year of the latest study of these ratios available. This method would leave intact the present system of taxing public service corporations and would only involve convincing the State Corporation Commission that the current

TABLE 35

 TAXES COMPUTED USING WEIGHTED AVERAGE RATIO IN SERVICE AREA, 1959
 BY A Southwestern Virginia Power Company

Localities Cities	Fair Market Value of the Utility's Property	Assessed Value	Using Weighted Average Ratio of 23.2	Rate Per \$100 Valuation	Amount of Tax	Taxes Actually Paid		Net Difference Decrease
						Taxes Paid	Net Difference Decrease	
Danville	\$ 885,078	\$ 205,338	\$3.40	\$ 6,981	\$ 12,025	\$ 5,044		
Galax	617,228	143,197	6.00	8,592	14,813	6,221		
Lynchburg	6,394,863	1,483,608	2.85	42,283	72,901	30,618		
Martinsville	421,965	98,592	1.85	1,824	3,145	1,321		
Radford	26,833	6,225	2.25	140	241	101		
Roanoke	10,889,878	2,526,452	2.78	70,235	121,096	50,861		
Counties								
Abingdon	877,185	203,507	3.80	7,733	13,333	5,600		
Amherst	1,983,645	461,366	3.70	17,071	29,432	12,361		
Appomattox	1,150	267	2.50	7	12	5		
Bedford	2,837,965	658,408	2.85	18,765	32,353	13,588		
Bland	1,050,040	243,609	4.66	11,352	19,588	8,236		
Botetourt	1,586,555	368,081	4.00	14,723	25,385	10,662		
Buchanan	2,837,628	658,330	3.50	23,042	39,727	16,685		
Buckingham	96,185	22,315	2.10	469	808	339		
Campbell	1,335,865	309,921	3.00	9,298	16,030	6,732		
Carroll	5,384,048	1,249,099	4.35	54,336	93,682	39,346		
Craig	101,610	23,574	3.30	778	1,341	563		
Dickenson	2,815,695	653,241	6.00	39,194	67,577	28,383		
Floyd	1,633,248	378,914	3.50	13,262	22,865	9,603		
Fluvanna	9,755	2,263	2.00	45	78	33		
Franklin	3,827,948	888,084	3.85	34,191	58,950	24,759		
Giles	38,455,983	8,921,788	3.40	303,341	523,001	219,660		
Grayson	1,663,905	386,026	5.98	23,084	39,776	16,692		
Henry	4,477,885	1,038,869	3.50	36,360	62,690	26,330		

TABLE 35 (continued)

Localities (Counties) (continued)	Fair Market Value of the Utility's Property	Assessed Value Using Weighted Average Ratio of 23.2	Average Rate Per \$100 Val- uation	Amount of Tax	Taxes Actually Paid	Net Difference Decrease
Montgomery	\$ 2,779,880	\$ 644,932	\$ 3.68	\$ 23,733	\$ 40,893	\$ 17,160
Nelson	765,465	177,588	2.85	5,061	8,726	3,665
Patrick	1,936,923	449,366	3.00	13,481	23,243	9,762
Pittsylvania	1,871,575	202,205	2.00	4,044	6,973	2,929
Pulaski	9,960,873	2,310,923	3.20	90,126	155,390	65,264
Roanoke	5,521,205	1,278,600	2.25	28,769	49,601	20,832
Russell	51,886,585	12,037,688	2.80	337,055	581,130	244,075
Scott	2,916,523	676,633	5.80	39,245	67,663	28,418
Smyth	4,364,283	1,012,514	4.11	41,614	71,677	30,063
Tazewell	3,511,338	814,630	4.88	39,754	68,587	28,833
Washington	3,803,228	882,349	8.05	71,029	122,404	51,375
Wise	551,105	127,856	4.71	6,022	10,374	4,352
Wythe	2,853,243	661,252	4.00	26,478	45,652	19,174
Totals	\$181,932,366	\$42,208,310		\$1,463,517	\$2,523,162	\$1,059,645

40 per cent equalization factor is inadequate and that it should be reduced to the average statewide assessment ratio of 31.5 per cent. Though this method achieves equality in the taxation between public service corporations, it does little to alleviate the inequities existing between public service corporations and other property owners.

Table 36 shows that the net loss in revenues to the cities and counties served by one utility, were the assessment equalized at 31.5 per cent instead of at 40 per cent, would amount to only \$536,057, of which \$488,420 would be applicable to the counties and \$47,637 applicable to the cities. Compared to the total revenues from all sources which were received by those counties served by the utility examined, amounting to \$54,298,518, in 1959,⁸ this would represent a loss in revenues of less than 1 per cent. On the other hand, the savings in taxes which would accrue to this company would have been over 21 per cent. Thus it can be seen that with only minor sacrifice on the part of the localities, some measure of equity presently missing could be achieved in this way.

Raising the assessment ratio on nonutility property. In equalizing the assessments on public service corporation property down to local assessment ratios, an average service area ratio and a statewide average ratio have been

⁸Report of the Auditor of Public Accounts, Commonwealth of Virginia, Year Ended June 30, 1960.

TABLE 36
TAXES COMPUTED USING STATEWIDE AVERAGE ASSESSMENT RATIO, 1959
By a Southwestern Virginia Power Company

Localities	Fair Market Value of the Utility's Property	Assessed Value Using State Ratio of 31.5%	Average Weighted Rate Per \$100 Valuation	Amount of Tax	Taxes Actually Paid	Net Difference Decrease
CITIES						
Danville	\$ 885,078	\$ 278,800	\$ 3.40	\$ 9,479	\$ 12,025	\$ 2,546
Gaithersburg	617,228	194,427	6.00	11,666	14,813	3,147
Lynchburg	6,394,863	2,014,382	2.85	57,410	72,901	15,491
Martinsville	424,965	133,864	1.85	2,476	3,145	669
Radford	26,833	8,452	2.25	590	741	51
Roanoke	10,889,878	3,430,312	2.73	95,363	121,096	25,733
Counties						
Albemarle	877,185	276,313	3.80	10,500	13,333	2,833
Amherst	1,988,645	626,423	3.70	23,178	29,432	6,254
Appomattox	1,150	362	2.50	9	12	3
Bedford	2,837,965	893,959	2.85	25,478	32,353	6,875
Bland	1,050,040	330,763	4.65	15,414	19,588	4,174
Botetourt	1,586,555	499,765	4.00	19,991	25,385	5,394
Buchanan	2,837,623	893,853	3.50	31,285	39,727	8,442
Buckingham	96,185	30,293	2.10	636	808	172
Campbell	1,335,865	420,797	3.00	12,624	16,030	3,406
Carroll	5,384,048	1,695,975	4.35	73,775	93,682	19,907
Craig	101,610	32,007	3.30	1,056	1,341	285
Dickenson	2,815,695	886,944	6.00	53,217	67,577	14,360
Floyd	1,633,248	514,473	3.50	18,007	22,865	4,858
Fluvanna	9,755	3,073	2.00	61	78	17
Franklin	3,827,948	1,205,805	3.85	46,423	58,950	12,527
Giles	38,455,983	12,113,635	3.40	411,864	523,001	111,137

TABLE 36 (continued)

Localities	Fair Market Value of the Utility's Property	Assessed Value Using Weighted State Ratio of 31.5%	Average Rate per \$100 Valuation	Amount of Tax Paid	Taxes Actually Paid	Net Difference Decrease
Counties (continued)						
Grayson	\$ 1,663,905	\$ 524,130	\$ 5.98	\$ 31,343	\$ 39,776	\$ 8,433
Henry	4,477,885	1,410,534	3.50	49,369	62,690	13,321
Montgomery	2,779,880	875,662	3.68	32,224	40,893	8,669
Nelson	765,465	241,121	2.85	6,872	8,726	1,854
Patrick	1,936,923	610,131	3.00	18,304	23,243	4,939
Pittsylvania	871,575	274,546	2.00	5,491	6,973	1,482
Pulaski	9,960,873	3,137,675	3.90	122,369	155,390	33,021
Roanoke	5,511,205	1,736,030	2.25	39,061	49,601	10,540
Russell	51,886,585	16,344,274	2.80	457,640	581,130	123,490
Scott	2,916,523	918,705	5.80	53,285	67,663	14,378
Smyth	4,364,283	1,374,749	4.11	56,502	71,677	15,175
Tazewell	3,511,338	1,106,071	4.38	53,976	68,587	14,611
Washington	3,803,228	1,198,017	8.05	96,440	122,404	25,964
Wise	551,105	173,528	4.71	8,176	10,374	2,198
Wythe	2,853,243	898,772	4.00	35,951	45,652	9,701
Totals	\$ 181,932,366	\$ 57,308,696		\$ 1,987,105	2,523,162	\$ 536,057

discussed as possible ways to achieve greater equity in utility taxation. The method which equates the assessment ratio of the public service corporations with ratios applicable to local taxpayers in each taxing district would not only result in a substantial reduction in revenues but also would result in higher taxes on utility property in some localities than in others, although such property is a part of a unitary business. Before considering the alternative of raising local assessment ratios, two factors introductory to this proposal will be considered briefly: namely, a review of the deterioration of the average state assessment ratio and a review of the inadequacies of local efforts.

Deterioration of the average state assessment ratio. Assessment ratios increased gradually in Virginia, from 1927 until 1936, primarily as a result of the Depression which drove actual sales values of properties downward. However, as the economy recovered and inflation pushed real estate sales values higher, average assessment ratios deteriorated consistently, until a low of 30.0 per cent was reached, in 1950. Since 1950 there has been relatively little change in average assessment ratios. Table 37 tabulates this trend.

Table 38 shows the declining trend in assessment ratios of counties and cities for the years 1942, 1950 and 1956. For example, in 1942, seventy-two out of one hundred counties were in Group 1, with assessment ratios in excess

TABLE 37

AVERAGE RATIOS OF ASSESSED ACTUAL SALE VALUE OF REAL
ESTATE, COUNTIES AND CITIES, SELECTED YEARS
COMMONWEALTH OF VIRGINIA, 1936 TO 1956

Year	Weighted County Averages	Weighted City Averages	Weighted State Averages
1936	42.2	78.8	56.7
1939	38.6	77.6	52.8
1942	35.4	70.5	48.8
1944	30.2	58.7	41.1
1950	22.0	42.8	30.0
1956	22.3	45.9	31.5

Sources: 1936, 1939 and 1942 data from "Changes in Real Estate Assessment Ratios," by John H. Russell, The Commonwealth, August, 1945, Table 1, p. 12. 1944 data from A Study of Property Values in Virginia With Comments on the Assessment Thereof, by William H. Stauffer, Richmond, Virginia, 1946. 1950 and 1956 data from Virginia Department of Taxation assessment ratio studies.

TABLE 38

GROUPING OF LOCALITIES BY RATIOS OF ASSESSED
VALUE TO SALES VALUE, COMMONWEALTH OF
VIRGINIA, 1942, 1950 AND 1956

	Assessment Ratio	1942	1950	1956
<u>Counties</u>				
Group 1	31% and above	72	9	4
Group 2	21% through 30%	21	56	28
Group 3	11% through 20%	7	27	57
Group 4	1% through 10%	--	6	9
Totals		100	98	98
		<u>=====</u>	<u>=====</u>	<u>=====</u>
<u>Cities</u>				
Group 1	31% and above	23	17	22
Group 2	21% through 30%	1	6	8
Group 3	11% through 20%	--	5	2
Group 4	1% through 10%	--	--	--
Totals		24	28	32
		<u>=====</u>	<u>=====</u>	<u>=====</u>

Sources: 1936, 1939 and 1942 data from "Changes in Real Estate Assessment Ratios," by John H. Russell, The Commonwealth, August, 1945, Table 1, p. 12. 1944 data from A Study of Property Values in Virginia With Comments on the Assessment Thereof, by William H. Stauffer, Richmond, Virginia, 1946. 1950 and 1956 data from Virginia Department of Taxation assessment ratio studies.

of 31 per cent; however, in 1956, only four of ninety-eight counties were in this category. It is also significant that the seventy-two counties in Group 1, in 1942, were dispersed largely into Group 2, with assessment ratios between 21 per cent and 30 per cent, by 1950, and that these same counties, in the main, fell to Group 3, with assessment ratios between 11 per cent and 20 per cent, by 1956. Table 38 further shows that the cities have maintained a better record of sustained assessment ratios than the counties. While the number of counties in Group 1 declined from 72 per cent, in 1942, to 4.1 per cent, in 1956, the number of cities so grouped fell from 96 per cent to 69 per cent over this same period.

The preceding data illustrate that statewide equalization of public service corporation property at 40 per cent, though reflecting the actual statewide average assessment ratio at one time,⁹ fails to achieve uniformity of taxation today because of the deterioration in assessment ratios over the years, particularly in the counties. This is evidenced by the fact that the assessment of the public service corporation property over the past thirty-five years has remained constant at a 40 per cent of value level, while the assessment ratio level for nonutility property has decreased from an average of 40 per cent to an average of only 31.5 per cent.

⁹In 1927.

Inadequacies of local effort. This reduction in the assessment ratio of nonutility property to a 31.5 per cent level, which resulted in comparatively lower revenues from ad valorem taxes, has resulted in greater reliance by these localities on federal and state supplements to meet the costs of local government. For example, the low ratio counties, those whose assessment ratios fall into the 1 per cent through 10 per cent category, generated from local sources only 38.71 per cent of their total revenues, while the relatively high ratio counties, with assessment ratios in excess of 31 per cent, obtained 70.49 per cent of their total revenues locally.

This relationship of county assessment ratios to percentage of total revenues from local sources is set forth in Table 39. Similar information as that appearing in Table 39 is not readily available for the cities without examination of unpublished city records. However, in view of their relatively higher and more uniform assessment ratios, it is reasonable to assume that, as is the case in the high ratio counties, substantial local effort is presently being made and fair revenues in general are being obtained from ad valorem taxes.

To the extent that the counties are not raising adequate revenues from local tax sources, federal and state supplements have become necessary to meet school and other

TABLE 39

RELATIONSHIP OF COUNTY ASSESSMENT RATIOS TO PERCENTAGE
 OF TOTAL REVENUES DERIVED FROM LOCAL SOURCES¹⁰
 COMMONWEALTH OF VIRGINIA, YEAR ENDED JUNE 30, 1960

	Per Cent of Total Revenues Derived from Local Sources
<u>Group 1</u>	
Assessment ratios 31% and above	70.49
Four counties	
<u>Group 2</u>	
Assessment ratios 21% through 30%	50.67
Twenty-eight counties	
<u>Group 3</u>	
Assessment ratios 11% through 20%	45.09
Fifty-seven counties	
<u>Group 4</u>	
Assessment ratios 1% through 10%	38.71
Nine counties	

Source: Report of the Auditor of Public Accounts,
 Commonwealth of Virginia, Year Ended June 30, 1960.

¹⁰

See Appendix B for more detailed data.

desired governmental expenditure requirements. The "Gray Commission," commenting on this aspect of comparatively lower local property taxes, stated that:

This indicates that what is actually taking place is in substantial measure a substitution of the taxing and revenue raising responsibility of the localities. This in turn means that as the situs of the responsibility for raising school funds is farther and farther removed from the situs of responsibility for spending school funds, it becomes less possible to resist the importunities of pressure and special groups demanding large increases. . . .¹¹

This same Commission report pointed out the absence of local effort in providing for necessary school funds by comparing the per cent of school funds from local taxes and appropriations with true taxable wealth in each of the counties.¹² This means of measuring local effort illustrated the variations which are found in Virginia. Basically, it is the assessment ratio which determines the amount of taxes so collected and, thus, which measures local effort. The "Gray Commission" in its report in this connection pointed out the unfairness of such a situation, stating that it is not

. . . fair to the localities making reasonable or unusual effort for the support of public schools to distribute

¹¹ Report of the Commission on State and Local Revenues and Expenditures, Commonwealth of Virginia, 1949, pp. 53-54.

¹² Ibid., p. 66, Table 24.

State equalization funds to localities which do not make an effort commensurate with their capabilities. To distribute State equalization funds without requiring a minimum effort would be an open invitation to some localities to decrease their own contributions, and this at the expense of localities which do make a reasonable effort.¹³

Having concluded that local effort varied widely throughout the state, the Commission further inquired if, in distributing state equalization funds, the state should require each locality to achieve an established minimum level of local effort. Adhering to their measurement of local effort, the equivalent true tax rate per \$100 of true taxable wealth for schools, it was recommended:

... that a locality be required to contribute to the support of schools a sum equivalent to a true tax rate of 80 cents per \$100 of locally taxable wealth in order to participate in the equalization fund. No locality would participate in the equalization fund until it shall have raised from local sources an amount of revenue for school operation and maintenance (excluding capital outlay and debt service) equivalent to the amount of revenue which would be derived from a rate of 80 cents per \$100 on the full value of locally taxable wealth as determined by the State Department of Taxation.¹⁴

A recent committee report of the Virginia State Department of Education also took notice of the lack of local effort in levying reasonable ad valorem taxes. It

¹³ Ibid., p. 66. (Italics supplied.)

¹⁴ Ibid., p. 70.

reported that "attempts to equalize expenditures per child without regard to local effort are unrealistic and, in some instances, result in compounding existing inequities."¹⁵ The committee went on to recommend that "the latest true values, as determined by the State Department of Taxation, be used in determining local effort. . . ."¹⁶

The proposal to raise local assessment ratios. To eliminate the discrimination that exists between taxpayers because of the differences in assessment ratios and tax rates, there is needed, as the "Gray Commission" suggests:

... a change in local assessment practice in various localities in which there are gross underassessments and high tax rates. If these localities were to abandon this deplorable practice and substitute therefor a more reasonable ratio of assessed value to actual value, with corresponding adjustments in tax rates, this would operate to increase the average statewide ratio. . . . The effect of this would be to lessen materially the inequities now existing, and while some inequalities would remain, even these inequalities would be small as compared to those now existing.¹⁷

Following the suggestion of the "Gray Commission" cited above, one proposal is to raise the level of locally assessed property to a statewide ratio of 40 per cent, the same level at which utility property is currently being

¹⁵ Committee Report of the State Department of Education, as reported in the Richmond Times Dispatch, Richmond, Virginia, September 3, 1961.

¹⁶ Ibid.

¹⁷ State and Local Revenues and Expenditures, op. cit., p. 24.

assessed. This proposal has several distinct advantages. First, a general increase in the property tax base would be effected which would provide for future needs of local government. Second, the increase in assessment ratios to a uniform level may not necessarily result in increased taxes on local taxpayers, since the tax rate can be adjusted. If tax rates are maintained as they are, however, new revenues to the localities would be obtained automatically. For example, if nonutility taxpayers were assessed on the basis of 40 per cent, the present assessed values in all of the counties would be increased approximately \$1,885,000,000, which in turn would increase local revenues by approximately \$65,514,000 annually.¹⁸ As applied to cities, assessed values would be increased \$192,700,000 in the aggregate, producing additional revenues in the amount of \$5,907,000 annually.¹⁹ A third advantage is that the existing inequities resulting from discriminatory assessment practices would be corrected.

As evidence that such a proposal would inure to the benefit of the counties, cities and the entire state, attention should be directed to the neighboring state of West Virginia. Historically, county boards of education in West Virginia had kept local effort as low as possible and,

¹⁸ See Appendix C for supporting data.

¹⁹ Ibid.

therefore, were able to receive more state aid for education. Assessment ratios in the various counties deteriorated rapidly from 1932, when the property tax accounted for 57.6 per cent of all state and local revenues, until 1957, when this percentage had declined to 25.4 per cent.²⁰

In 1955, the West Virginia legislature passed enabling legislation, which required that the County Assessors, under the direction of the State Tax Commissioner, bring the level of assessment of nonutility property in all counties from not less than 35 per cent, beginning with the fiscal year 1956-57, to not less than 50 per cent of the appraised value of such property by fiscal year 1958-59. Failure of a particular county to use an assessment ratio of less than 50 per cent results in that county losing a proportionate part of its full allocation of state aid for schools.²¹

The application of the 1955 reassessment law in West Virginia has achieved an unusually high degree of success. In 1955, the first effective year of the corrective legislation, the statewide assessment ratio was 41.09 per cent. In 1960, five years after the plan had been in effect, the

²⁰ West Virginia Taxes, Final Report of State Tax Study Commission, Charleston, West Virginia, November, 1960, p. 36.

²¹ Senate Bill No. 3, First Extraordinary Session (May 9 - 13, 1955), Legislature of West Virginia.

statewide ratio had risen to 52.47 per cent, an increase of 27.7 per cent.²² By this measure, West Virginia has improved assessment ratios generally and has thereby achieved greater uniformity in taxation and an improvement of the entire property tax structure.

A similar plan to raise the assessment level to a minimum of 40 per cent could be adopted in Virginia. Immediate implementation of such a requirement might work hardship on certain localities currently operating under an assessment ratio far removed from the 40 per cent level deemed desirable in this proposal. Table 40 presents, therefore, a schedule of minimum assessment levels so proposed as to achieve the desired level over a period of five years, allowing time for each locality to make a gradual adjustment in ratios. If the first date of implementation of this plan were January 1, 1963, the minimum level of assessments would be established at 15 per cent of full value for that year and would be raised 5 per cent each year until the desired minimum of 40 per cent is realized.

It should be further proposed that to the extent a locality fails to meet the minimum assessment ratio level established for each year, participation in state supplements to which the locality would otherwise be entitled

²² West Virginia Taxes, op. cit., p. 36.

TABLE 40
PROPOSED STATEWIDE MINIMUM ASSESSMENT RATIO

Year	Required Minimum Assessment Ratio
1963	15
1964	20
1965	25
1966	30
1967	35
1968	40

would be limited to the same percentage which the local assessment ratio is to the required minimum. For example, assume that in 1967, at which time the required minimum would be 35 per cent, County A's assessment ratio is found to be only 30 per cent. If the amount of state aid to which this county would otherwise be entitled were \$700,000 for the year, its failure to comply would limit its participation in the state assistance to 30/35ths of \$700,000, or \$600,000.

In order not to unduly penalize certain localities during this period of adjustment the penalty provisions would be limited in the following manner. For 1963, the first year of implementation, each locality would be guaranteed 100 per cent of the aid received in 1962. Thus, the penalty provisions would not apply during this first year. However, for 1964, each locality would be guaranteed only 90 per cent of the state assistance received in 1963.

Table 41 sets forth the limitations on the penalty provisions as herein proposed.

TABLE 41
LIMITATIONS ON PENALTY PROVISIONS

Year	Required Minimum Assessment Ratio	Guarantee of the Prior Year's State Supplement
1963	15	100%
1964	20	90
1965	25	80
1966	30	70
1967	35	Discontinued
1968	40	Discontinued

Although there is presently no legal authority for the Virginia State Tax Commissioner to equalize assessments of nonutility property, both real and personal, as between counties and cities, his office is presently making fair market value appraisals of real estate when requested by local governing bodies. The State Tax Department has available a staff of appraisers who are actively engaged in their work throughout the state. Under present law, however, the governing bodies in counties and cities are not required to accept the State Tax Department's findings of fair market value. In order to achieve uniformity and equalization under this proposal, it would be necessary that the State Tax Commissioner be directed by statute to raise local assessments to a statutory minimum level of not less than the 40 per cent statewide ratio based on his appraisals.

Under the above proposal it is contemplated that each locality continue to levy that rate of tax on property located within its boundaries which it deems necessary to meet the costs of local government. However, within each taxing district the rate of tax imposed on real and personal property should be uniform. There is nothing inherently peculiar about personal property which requires that it be subject to a different rate of taxation than that imposed on realty. Further, many inequities could be completely eliminated by both the assessment and taxation of all types of property uniformly within each locality.

Although its equity is apparent, the legality of such a proposal is subject to some question. The state has the power to classify property and is also empowered to regulate the rate of taxation within local jurisdictions as a proper exercise of the power of state sovereignty;²³ however, it is not so clear in regard to its power to require uniform rates of taxation on both real and personal property within each taxing district. To the extent that the constitutional requirements are not violated, and to the extent that the further

²³ Williamson v. State of New Jersey, 130 U.S. 189 (1889); Virginia and Tennessee R.R. Co. v. Washington County, 71 Va. 471 (1878); S.V.R.R. Co. v. Supervisors of Clark County, 78 Va. 269 (1884).

constitutional barring of any law impairing the obligation of contracts is not violated,²⁴ uniform rates on real and personal property, within each taxing district, appear both reasonable and desirable.

Summary

In this chapter four alternative solutions were examined in respect to the correction of the present system of taxation, especially as it affects Virginia's public service corporations. First, there was introduced the possibility of local taxation of utilities on the basis of productivity. Considered second, at the other extreme, was state taxation of public service corporations with no local participation in the revenues so derived. As mentioned, this alternative would necessitate, in order to make it politically palatable, additional reforms and changes, such as state assumption of instructional salary responsibility and possibly even the imposition of a state sales and use tax.

Finally, some attention was directed toward greater equalization in the assessment practice as a possible alternative. This alternative took two directions.

First, the assessment ratio on public service corporation

²⁴ Section 58 of the Constitution of Virginia so provides. Thus, where the taxation of property is the source of funds for the contractual repayment of principal and payment of interest is impaired by the restriction of rates of levy, this constitutional provision may be violated.

property could be lowered to some level corresponding to local assessment ratios, whether this be to the level prevailing in each locality considered separately, to the level of one company's service area average ratio, or to a statewide average assessment ratio. The second possibility discussed was the plan to raise all non-utility property assessments throughout the state to the same level at which public service corporation property is currently being assessed. In terms of equity to all concerned, this latter possibility appears to be possessed of considerably more merit; however, as presented in the following chapter, there exist other alternatives worthy of examination.

CHAPTER 8

REFORMS IN THE TAXATION OF PUBLIC SERVICE CORPORATIONS, PART II

A separate chapter has been reserved for consideration of two final alternatives because of their unusual departure from the present method of taxing public service corporations. The first of these alternatives involves centralized assessment of utility property with certification of assessed values subject to local taxation made to the various localities on some basis which considers factors in addition to situs. The second alternative suggests both centralized assessment and taxation of public service corporations, the revenues derived being then allocated back to the various localities again on some basis which considers factors in addition to situs.

Although these can be considered as separate and distinct alternatives, the allocation to the various localities on some new basis, whether it is the allocation of assessed values for local taxation or the allocation of centrally collected taxes, is basically similar and can thus be considered together. Before considering the basis for allocation, whether assessed values or centrally collected taxes, attention can first be directed toward

the question of what rate of levy the central government should impose if it were to both assess and levy taxes on the public service corporations.

The Central Tax Levy Rate¹

Need for uniformity

The equalization process fails to accomplish its objective if public service corporation property assessments are first "equalized" at 40 per cent of "market value" and then subjected to nonuniform local rates of levy. At the present time, to take an extreme example, the electric utility serving the City of Richmond pays \$1.88 for each \$100 of assessed value of real estate located within the city limits, although another electric utility which serves the Town of Abingdon would have to pay \$8.13 for each \$100 of assessed value of similar property of identical full value. Further, there exists a lack of uniformity in the rate of taxation of like property owned by the same public service corporation but located in different taxing districts. Moreover, the identical piece of property is frequently subjected to varying rates of taxation by different taxing authorities within the same taxing district. For example, utility real property located in the Town of Abingdon is subject to a county levy of

¹See Appendix D for discussion of the special problems arising in connection with towns which are not autonomous fiscal entities and which do not uniformly levy a tax on property.

\$6.25 per \$100 of assessed valuation and also a town levy rate of \$1.85.² There is also a lack of uniformity in taxation within the same magisterial district. Again, the Town of Abingdon is a case in point. Washington County, in which the Town of Abingdon is located, imposes a levy rate of \$6.25 on property located within the town, and a rate of \$9.05 on property located elsewhere in the same magisterial district. Table 42 illustrates some of the extremes in levy rates which exist in Virginia.

The levy rate

The rates of taxation presently existing in Virginia lack uniformity. This gives rise to the problem of what rate the central government of the state should impose in order to achieve both equity and uniformity while maintaining, after allocation, fiscal stability within the various taxing districts. Similar to the various ways assessment ratios could be reduced on public service corporation property to better correspond to local conditions, there are three alternatives in establishing a central rate of taxation.

Use of local rates of levy

Under this alternative, the state would impose the same rate of levy on the centrally assessed valuation of

²Some utility property is classed as personality, subject to a \$6.00 rate.

TABLE 42

LEVY RATES ON ELECTRIC UTILITY SUBSTATION,
SELECTED TAXING DISTRICTS IN VIRGINIA, 1959

Taxing District	County and District Levy Rate	Town Levy Rate	City Levy Rate	Total Levy Rate
Town of Abingdon, Washington County	\$6.25	\$6.00	--	\$12.25
Abingdon District, Washington County	9.05	--	--	9.05
Town of Saltville, Smyth County	3.40	1.50	--	4.90
City of Richmond	--	--	\$1.88	1.88

Source: 1959 Tax Rates, Virginia Department of Taxation, Bulletin 103.

public service corporation property as exists in the locality in which the property is located. This would have no bearing on the allocation device for centrally collected taxes so obtained. Although the amounts the localities would receive as state allocation would depend entirely on the basis devised for allocation, the taxes contributed by the utilities would remain subject to varying local rates, the lack of uniformity in which has already been discussed.

Average operating system rates of levy

Under this method, the average rate of levy on non-utility real estate within the operating area of a particular utility would be computed and applied to the

centrally assessed value of the public service corporation's property. This alternative would achieve a greater degree of equity between the utility and nonutility property owners; however, to any extent that assessed valuations are determined by statewide assessment ratio studies, it fails to achieve the required uniformity between public service corporations of the same class, and would continue to sanction the lack of uniformity in assessment ratios which presently exists.

Statewide average rate of levy

This method would involve the computation of the average rate of levy on real estate in the entire state, including both counties and cities. It would yield a rate which has the advantage of statewide uniformity, flexibility and consistency with the method of assessment. In those areas generally known as low assessment-high rate areas, such as southwest Virginia, the statewide average levy rate would be considerably less than the average of rates currently in effect. The computation of such a rate is presented in Table 43. It should be noted that this rate could change each year; but, for purposes of illustration, it is not material which year is selected for this computation. Once the average rate is determined, it is then applied to the assessed values, centrally ascertained, to determine the total amount of centrally collected taxes.

TABLE 43

AVERAGE RATE OF LEVY ON REAL ESTATE,
COUNTY AND CITIES, VIRGINIA, 1958

	Assessed Values of Real Estate Subject to Local Taxation	Taxes Levied on Real Estate	Average Rate of Taxation Per \$100 Assessed Value
Cities	\$2,176,834,125	\$52,207,764	\$2.40
Counties	<u>1,773,183,798</u>	<u>53,729,217</u>	<u>3.03</u>
Aggregate	<u>\$3,950,017,923</u>	<u>\$105,936,981</u>	<u>\$2.68</u>

Source: 1958 Tax Rates, Virginia Department of Taxation, Bulletin 102.

The Allocation of Central Levies

Allocation of centrally levied and collected taxes will be considered first. Once the basic allocation process is established, then consideration can be given to the alternative, that of allocating back to the localities centrally assessed values. The current problem, admittedly the more paramount and least susceptible to a simple solution, involves the procedures whereby the centrally collected tax levy on all public service corporation property is allocated back to the various taxing districts. Although it is presumed that in theory the proposal which is herein developed would be applicable to all public service corporations, technical and regulatory differences between the various types of public utilities may require some adjustment in procedures from those employed

in the present suggested application to electric light and power companies.

In effecting the allocation of centrally levied taxes to the cities, counties and towns, it would be necessary to engage in a separate computation for each operating company. To group them all together and allocate a total statewide tax collection to the localities would not only be difficult to do but also would introduce inequities, if not on the public service corporations themselves, at least upon the participating localities. Thus, this analysis is concerned with the levying and allocation of property taxes by the central agency upon the property of one representative electric power company.

As has been pointed out, it is current practice in Virginia to assess public service corporation property at 40 per cent of its "value," such assessment being made by the State Corporation Commission. "Value" is defined generally as original cost less an arbitrary allowance for depreciation of approximately 20 per cent. Whether or not this method of determining full value is realistic is of no consequence in this analysis, although other methods, as previously discussed, may be more meaningful. The "40 per cent rule" is thus subject to some question; however, this method is currently in effect and its adoption in this analysis is necessitated by the facts of reality. The operation of this analysis, further,

would not be affected by an assessment of any other percentage, others of which may be preferable to the one in practice.

Once the assessment has been made, the average statewide rate of levy can be applied, the result of such computation being the tax bill presented to the public service corporation in question. In the case of the utility being herein examined, the assessed value of its property, in 1959, was \$72,772,943. Applying the computed statewide average rate of levy to this assessed value, a tax bill of \$1,950,315 would have resulted. The bill so computed is \$572,845 less than the amount of taxes actually paid by this company in 1959;³ however, this results from the fact that the average rate of levy is generally higher in the area served by the company under observation than it is in other sections of the state, and thus higher than the statewide average levy rate. That this would have resulted in an excessive loss of revenues to the localities within this company's service area had this proposal been in effect, in 1959, is of little import. All that the cities and counties would have had to do is lower their rates and raise their assessment ratios, which, as has been observed earlier, are inordinantly low.

³Actual taxes paid by this company, in 1959, amounted to \$2,523,160, exclusive of taxes on Merchants' Capital.

The next step is to allocate the funds collected, in this illustration the \$1,950,315 levy on one company's property, to the cities and counties located within the service area. To this end, there are several relevant bases for making such an allocation, a few of which are now to be considered as possibilities for adoption.

Situs of investment basis

This basis would consider the dollar investment in each of the localities and the tax levy would be allocated accordingly. The present tax system operates essentially in this fashion, the only difference being that the individual taxing districts impose the levy directly upon the property so located within their taxing area rather than depend upon a state allocation made on the same basis. To so allocate the central levy on this basis alone would be an improvement only in the sense that a uniform rate of levy was being employed. It would not, however, resolve the inequities which exist between public service corporations and nonutility property owners, or between the various taxing districts.

Table 44 illustrates the effect such an allocation basis would have on the localities served by this particular utility. As would be expected, the loss in revenues to the various taxing districts would have been roughly in the same ratio as the reduction in total company ad valorem taxes, except to the extent that individual local

TABLE 44

ALLOCATION OF A SOUTHWESTERN VIRGINIA POWER COMPANY'S 1959
 PROPERTY TAXES, COMPUTED ON THE STATEWIDE AVERAGE RATE
 TO LOCALITIES ON THE BASIS OF INVESTMENTS

Cities	Investment (Assessed Values) Amount	Allocation of Estimated Taxes		Actual Taxes Paid		Change in Revenue Loss Gain	
		Per Cent	Taxes	\$	¶	\$	¶
Danville	\$ 354,031	48.6%	\$ 9,478	\$ 12,025	¶ 14,813	\$ 2,547	¶ 8,202
Galax	246,891	33.9	6,611	72,901	4,348	3,933	---
Lynchburg	2,557,945	3.515	68,523	3,145	---	8,115	---
Martinsville	169,986	2.34	4,564	241	---	1,419	---
Radford	10,733	.015	293	121,095	4,349	52	52
Roanoke	4,355,951	5.986	116,746				---
Counties							
Albemarle	350,874	.482	9,400	13,333	3,933	---	---
Amherst	795,458	1.093	21,317	29,432	8,115	---	8
Appomattox	460	.001	20	12	---	1,928	---
Bedford	1,135,186	1.560	30,425	32,353	8,335	8,335	---
Bland	420,016	.577	11,253	19,588	8,370	8,370	---
Botetourt	634,622	.872	17,007	25,385	9,302	9,302	---
Buchanan	1,135,051	1.560	30,425	39,727	9,226	9,226	---
Buckingham	38,474	.053	1,034	808	1,715	1,715	---
Campbell	534,346	.734	14,315	16,030	35,972	35,972	---
Carroll	2,153,619	2.959	57,710	93,682	37,386	37,386	---
Craig	40,644	.056	1,092	1,341	249	249	---
Dickenson	1,126,278	1.543	30,191	67,577	5,251	5,251	---
Floyd	653,299	.898	17,514	22,865	5,251	5,251	---
Fluvanna	3,902	.005	98	78	20	20	---
Franklin	1,531,179	2.104	41,035	58,950	17,915	17,915	---
Giles	15,382,393	21.137	412,238	523,001	110,763	110,763	---
Grayson	665,562	.915	17,845	39,776	21,931	21,931	---
Henry	1,791,059	2.461	47,997	62,690	14,693	14,693	---

TABLE 44 (continued)

Counties (continued)	Investment (Assessed Values) Amount	Allocation of Estimated Taxes Per Cent	Actual Taxes Paid	Change in Revenue Loss Gain	
				1.528%	\$ 11,091
Montgomery	\$ 1,111,952	1.528%	\$ 29,801	\$ 40,892	\$ 11,091
Nelson	306,186	.421	8,211	8,726	.515
Patrick	774,769	1.065	20,771	23,243	2,472
Pittsylvania	348,630	.479	9,342	6,973	2,369
Pulaski	3,984,349	5.475	106,780	155,390	48,610
Roanoke	2,204,482	3.029	59,075	49,601	9,474
Russell	20,754,634	28.520	556,230	581,130	24,900
Scott	1,166,609	1.603	31,264	67,663	36,399
Smyth	1,745,713	2.399	46,788	71,677	24,889
Tazewell	1,404,535	1.930	37,641	68,587	30,946
Washington	1,521,291	2.090	40,761	122,404	81,643
Wise	220,442	.303	5,909	10,374	4,465
Wythe	1,141,297	1.568	30,581	45,652	15,071
Totals	\$ 72,772,848	100.000%	\$ 1,950,315	\$ 2,523,160	\$ 13,568

rates of levy departed from the statewide average rate. Although the tax savings which would accrue to this company by application of a statewide average levy rate would have been approximately 20 per cent, only a few counties would show a loss in revenue substantially greater than 20 per cent. For example, losses in excess of 50 per cent would be felt by only four counties, Dickenson, Grayson, Scott and Washington, each one of which has low local assessment ratios and higher than average local rates of levy.

As indicated, this method achieves a greater degree of equity only to the extent that all public service corporations in the state would be assessed and taxed uniformly. The allocation process, however, does not appear substantially more equitable as between the taxed utilities and other property owners. There is nothing in this method to encourage increased local assessment ratios and thus greater local effort toward meeting the costs of local government. The low ratio counties would continue to assess local property at considerably less than 40 per cent, depending upon higher rates of levy, caused by decreasing local assessment ratios and rising levy rates in some localities, would result in an increased tax bill to some utilities already enjoying a more equitable tax treatment by virtue of being located in localities making greater local effort. Thus, new

inequities might conceivably arise from the adoption of this method of allocation.

Revenues generated basis

It is proposed, under this method, that a centrally administered property tax levy should be allocated to the various localities on the basis of the percentage of total revenue a particular operating utility derived therefrom. Table 45 shows the results of the allocation of one company's taxes on such a basis.

The areas which produce the greatest revenue to a utility are generally the more heavily populated and are more highly industrialized; thus, these localities are in greater need of revenue to finance the generally heavier cost of local government. In this method the consumers benefit directly in proportion to their consumption of electricity, or other service rendered by the utility. Further, such a method might well provide an incentive to the various localities to attract new industry and make the locality more attractive to potential citizens. Thus, as a locality's use of utility services expands, its participation in ad valorem taxes on the public service corporations providing such services also increases. Also, this proposal eliminates inequity which arises from the location of utility property in areas with high rates of levy and assessment ratios less than the 40 per cent applied to public service corporation property.

TABLE 45

ALLOCATION OF A SOUTHWESTERN VIRGINIA POWER COMPANY'S 1959 PROPERTY TAXES, COMPUTED ON THE STATEWIDE AVERAGE RATE TO LOCALITIES ON THE BASIS OF REVENUES GENERATED

CITIES	Company Revenues Generated		Allocation of Estimated Taxes		Actual Taxes Paid		Change in Revenue Gain	
	Amount	Per Cent	\$	¢	\$	¢	Loss	Gain
Danville	\$ 236,570	3.03%	\$ 59,270	¢ 12,025	\$ 47,245	¢ 11,516	---	---
Galax	549,402	1.350	26,329	14,813	72,901	94,124	---	---
Lynchburg	3,484,366	8.564	167,025	28,358	3,145	25,213	---	---
Martinsville	591,580	1.454	28,358	3,145	241	16,785	---	---
Radford	355,097	873	17,026	269,553	121,095	148,458	---	---
Roanoke	5,023,163	13.821	269,553	121,095	121,095	148,458	---	---
Counties								
Albemarle	355,633	874	17,046	13,333	13,333	3,713	---	3,713
Amherst	621,787	1,528	29,801	29,432	29,432	3,698	---	3,698
Appomattox	556	1,001	20	12	12	---	---	---
Bedford	1,157,298	2,845	55,486	32,353	32,353	23,135	---	23,135
Bland	190,055	467	9,108	19,588	19,588	10,480	---	10,480
Botetourt	1,026,494	2,525	49,245	25,385	25,385	23,860	---	23,860
Buchanan	1,636,742	4,023	78,461	39,727	39,727	38,734	---	38,734
Buckingham	556	1,001	20	808	808	798	---	798
Campbell	634,234	1,559	30,405	16,030	16,030	14,375	---	14,375
Carroll	1,637,038	4,024	78,481	93,682	93,682	15,201	---	15,201
Craig	59,974	147	2,867	1,341	1,341	1,526	---	1,526
Dickenson	913,998	2,247	43,824	67,577	67,577	23,753	---	23,753
Floyd	362,698	891	17,377	22,865	22,865	5,488	---	5,488
Fluvanna	7,868	0.19	371	78	78	293	---	293
Franklin	1,072,915	2,637	51,430	58,950	58,950	7,520	---	7,520
Giles	809,848	1,991	38,831	523,001	523,001	484,170	---	484,170
Grayson	634,699	1,559	30,405	39,776	39,776	9,371	---	9,371
Henry	1,840,493	4,524	88,232	62,690	62,690	48,602	---	48,602
Montgomery	1,013,792	2,492	40,892	40,892	40,892	7,710	---	7,710

TABLE 45 (continued)

Counties (continued)	Company Revenues Generated		Allocation of Taxes		Actual Taxes Paid		Change in Revenue Loss	
	Amount	Per Cent	Estimated	Taxes	Paid		Gain	
Nelson	\$ 406,318	1.99%	\$ 19,484	\$ 8,726	\$ 8,726		\$ 10,758	
Patrick	648,896	1.595	31,108	23,243	23,243		7,865	
Pittsylvania	118,177	2.290	5,656	6,973	6,973	1,317	---	
Pulaski	1,360,652	3.344	65,218	155,390	155,390	90,172	---	
Roanoke	2,862,455	7.036	137,224	49,601	49,601	518,681	87,623	
Russell	1,302,561	3.202	62,449	581,130	581,130	26,024	---	
Scott	868,699	2.135	41,639	67,663	67,663		---	
Smythe	3,363,135	8.266	161,213	71,677	71,677		89,536	
Tazewell	1,700,661	4.180	81,523	68,587	68,587		12,936	
Washington	1,040,660	2.558	49,889	122,404	122,404	72,515	---	
Wise	207,114	5.09	9,927	10,374	10,374	447	---	
Wythe	988,958	2.431	47,412	45,652	45,652		1,760	
Totals	\$40,684,802	100.000%	\$1,950,315	\$2,523,160	\$2,523,160	\$1,265,927	\$693,082	

⁴ See Appendix P for detailed computations.

Table 45 also shows that approximately 80 per cent of the total loss in revenues to cities and counties, both as a result of allocating utility taxes on the basis of company operating revenues generated and as a result of using a statewide average rate of levy lower than the individual rates found in this company's operating area, would be borne by two counties, Giles and Russell. On the other hand, the largest relative gains would accrue to the more urban areas. The cities, for example, would realize an increase in total revenues from \$224,220 to \$567,561, or of over 150 per cent.

There is one drawback to this method, however. Although there is some general relationship between a utility's operating revenues and the need for government services, the relationship is not always perfect. The location of several large industrial plants in one locality, for example, may give rise to the consumption of huge quantities of electric power and, thus, enable the locality to participate heavily in the allocation of ad valorem taxes on the electric power company. However, the employees of these plants may reside in another taxing district, imposing on that district the costs of governmental services.

Population basis

In order to overcome the difficulties and inequities of allocating centrally collected ad valorem taxes on

public service corporations on the basis of investment or company operating revenues generated, it can be argued that these taxes should be allocated on the basis of population since this better measures the need for government services. Although this is probably true, there are several difficulties in such a method.

First, although people avail themselves of government services more or less proportionately it does not follow that they consume utility services in the same manner. This particular objection, however, can be overcome. Though income differentials permit a larger consumption of utility services, electric power for example, it is not expected that the actual consumption of these services varies significantly between income groups. Further, although one family consumes more electricity for heating and cooking, another uses more gas for these purposes.

A second objection lies in the fact that there is some overlapping of utility companies within one taxing district. Where two power companies serve different sections of the same county, for example, the use of the population basis for allocation of taxes would allow that locality to participate up to twice the extent to which it would otherwise be entitled. To overcome this objection, and as a substitute to the population basis, an allocation method based on watt-hour meters could be adopted.

Watt-hour meters basis

In the case of electric power companies this method could be used to allocate centrally collected ad valorem taxes. It has two major advantages in addition to shifting the benefits of ad valorem taxation of public service corporations from those localities in which utility property is located to those localities in which the utility's customers are located.

First, this method minimizes the disadvantages mentioned in connection with allocation on the basis of revenue generated within the localities. The watt-hour meter represents one customer, whether it be a small or large customer. Thus, a locality in which an industrial plant is located would receive credit in the allocation process for only the plant itself and would not reap further benefits unless the family units employed by the industrial plant were also located within the locality.

The second advantage of this method is that it considers each utility's customers rather than population as a whole. Thus, in those localities served by more than one public service corporation of the same type, benefits would accrue only to the extent each utility so operated within the locality. This particular advantage is so great that the basis of population factor for allocation will no longer be considered.

Table 46 shows the effects of this method of allocation. Once again, two counties stand out as the largest

TABLE 46

ALLOCATION OF A SOUTHWESTERN VIRGINIA POWER COMPANY'S 1959
 PROPERTY TAXES, COMPUTED ON THE STATEWIDE AVERAGE RATE
 TO LOCALITIES ON THE BASIS OF WATT-HOUR METERS

CITIES	Meters Number	Per cent	Allocation		Actual		Change in Revenue Loss Gain	
			Taxes Estimated	Taxes Paid	Taxes Paid	Taxes Paid	Change in Revenue Loss Gain	Change in Revenue Loss Gain
Danville	10	.004	\$ 78	\$ 12,025	\$ 11,947	\$ 14,813	---	3,247
Gates	2,091	.926	18,060	159,458	172,901	19,588	---	82,557
Lynchburg	18,460	8.176	159,458	839	3,145	2,306	221	---
Martinsville	96	.043	20	241	241	221	169,092	169,092
Radford	2	.001	290,187	121,095	121,095	121,095	121,095	121,095
Roanoke	33,594	14.879						
Counties								
Albemarle	1,575	.698	13,613	13,333	13,333	13,333	280	280
Amherst	5,347	2.368	46,183	29,432	29,432	29,432	16,751	16,751
Appomattox	5	.002	39	12	12	12	27	27
Bedford	5,176	2.292	44,701	32,353	32,353	32,353	12,348	12,348
Bland	1,871	.829	16,168	19,588	19,588	19,588	3,420	3,420
Botetourt	3,367	1.491	29,079	25,385	25,385	25,385	3,694	3,694
Buchanan	10,001	4.429	86,380	39,727	39,727	39,727	46,653	46,653
Buckingham	5	.002	39	808	808	808	769	769
Campbell	4,971	2.202	42,946	16,030	16,030	16,030	26,916	26,916
Carroll	7,419	3.286	64,087	93,682	93,682	93,682	29,535	29,535
Craig	5,534	.236	4,603	1,341	1,341	1,341	3,262	3,262
Dickenson	5,627	2.492	48,602	67,577	67,577	67,577	18,975	18,975
Floyd	3,507	1.553	30,288	22,865	22,865	22,865	7,423	7,423
Fluvanna	64	.028	546	78	78	78	468	468
Franklin	8,210	3.636	70,914	58,950	58,950	58,950	11,964	11,964
Giles	5,634	2.495	48,660	523,001	523,001	523,001	474,341	474,341
Grayson	5,270	2.334	45,520	39,776	39,776	39,776	5,744	5,744

TABLE 46 (continued)

Counties (continued)	Watt-hour Meters Number	Allocation of Estimated Taxes Per Cent	Actual Taxes Paid	Change in Revenue Loss Gain
Henry	11,150	4.938%	\$ 96,307	\$ 62,690
Montgomery	7,685	3.404	66,389	\$ 40,892
Nelson	1,332	5.590	11,507	8,726
Patrick	4,855	2.150	41,932	23,243
Pittsylvania	5,593	2.263	5,129	1,894
Pulaski	9,213	4.080	79,573	155,390
Roanoke	14,529	6.435	125,203	49,601
Russell	6,207	2.749	53,614	581,130
Scott	7,192	3.185	62,118	67,663
Smyth	9,522	4.217	82,245	71,677
Tazewell	12,437	5.508	107,423	68,587
Washington	9,075	4.019	78,383	122,404
Wise	2,065	9.915	17,845	10,374
Wythe	7,102	3.145	61,337	45,652
Totals	225,793	100.000%	\$ 1,950,315	\$ 2,523,160
				\$ 1,196,307
				\$ 623,462

losers of ad valorem tax revenue. These two counties, Giles and Russell, possessed only 5.244 per cent of the utility's total watt-hour meters, indicating that the number of customers in these localities is relatively small. The loss in revenue to these two counties would be enormous; however, it should be noted that the actual taxes paid were on the basis of investment alone. Further, this illustration has used a statewide average rate of levy which is less than that currently imposed in these counties.

Pole-line miles basis

The current investment-situs basis of ad valorem taxation of public service corporations, particularly electric power companies, allows substantial tax revenues to accrue to those localities through which the utility's services pass, without regard to the benefits derived therefrom by the consumers of the utility's services or to the needs for government services stemming therefrom. Frequently, electric transmission lines cross rough terrain in sparsely settled areas, necessitating a greater investment in such lines. As a result, those localities reap tax benefits which would not abound to them otherwise. On the other hand, the consumers of electric power in other localities are paying, through their rates, taxes which more equitably should accrue to the locality in which the government services are provided. This method

of allocation allows consideration to both transmission and distribution miles of line, regardless of cost, depriving some localities of revenue from transmission investments in mountainous terrains and transferring benefits to those localities with larger distribution line miles, presumably the same ones which produce more company operating revenue, and in which more consumers reside, and in which the need for government services is greater.

Table 47 shows the effect of this method of allocation. It is noted, again, that two counties account for approximately 80 per cent of the total loss in revenues to the localities. This is due to the fact that generating facilities are located in these counties, rather than extensive transmission and distribution facilities.

Combination of bases

Each of the preceding bases of allocation of centrally collected ad valorem levies on public service corporations has something which can be said favorably of it. Further, each of the methods is possessed of some unfavorable characteristics when applied as the only basis of allocation. However, it is possible that a formula combining each of these methods might prove to be satisfactory. Some benefit should accrue to those localities which have attracted investment; thus, the

TABLE 47

ALLOCATION OF A SOUTHWESTERN VIRGINIA POWER COMPANY'S 1959 PROPERTY TAXES, COMPUTED ON THE STATEWIDE AVERAGE RATE TO LOCALITIES ON THE BASIS OF POLE-LINE MILES

Cities	Pole-Line Miles		Allocation of Estimated Taxes		Actual Taxes Paid		Change in Revenue	
	Number	Per cent					Loss	Gain
Galax	.76	.004	\$ 224	\$ 78	\$ 12,025	\$ 11,947	\$ ---	\$ ---
Lynchburg	41.19	.003	\$ 293	\$ 4,369	\$ 14,813	\$ 10,444	\$ ---	\$ ---
Martinsville	182.34	.003	\$ 83	\$ 19,367	\$ 72,901	\$ 53,534	\$ ---	\$ ---
Radford	15.29	.003	\$ 54	\$ 1,619	\$ 3,145	\$ 1,526	\$ ---	\$ ---
Roanoke	290.78	.003	\$ 1.584	\$ 30,893	\$ 121,095	\$ 102	\$ ---	\$ ---
Counties								
Albemarle	235.50	1.281	\$ 24,984	\$ 13,333	\$ ---	\$ 11,651	\$ ---	\$ ---
Amherst	566.04	3.084	\$ 60,148	\$ 29,432	\$ ---	\$ 30,716	\$ ---	\$ ---
Appomattox	156	.003	\$ 59	\$ 12	\$ ---	\$ 47	\$ ---	\$ ---
Bedford	895.44	4.079	\$ 95,156	\$ 32,353	\$ ---	\$ 62,803	\$ ---	\$ ---
Bland	341.17	1.359	\$ 36,256	\$ 19,588	\$ ---	\$ 16,663	\$ ---	\$ ---
Botetourt	353.37	1.925	\$ 37,543	\$ 25,385	\$ ---	\$ 12,158	\$ ---	\$ ---
Buchanan	805.18	4.387	\$ 85,560	\$ 39,727	\$ ---	\$ 45,833	\$ ---	\$ ---
Buckingham	6.63	.036	\$ 702	\$ 808	\$ 106	\$ ---	\$ ---	\$ ---
Campbell	367.76	2.004	\$ 39,084	\$ 16,030	\$ ---	\$ 23,054	\$ ---	\$ ---
Carroll	1,077.84	5.873	\$ 14,542	\$ 93,682	\$ ---	\$ 20,860	\$ ---	\$ ---
Craig	29.10	.159	\$ 3,101	\$ 1,341	\$ 1,760	\$ ---	\$ ---	\$ ---
Dickenson	624.43	3.402	\$ 66,350	\$ 67,577	\$ 1,227	\$ ---	\$ ---	\$ ---
Floyd	722.88	3.939	\$ 76,823	\$ 22,865	\$ 53,958	\$ ---	\$ ---	\$ ---
Fluvanna	3.40	.919	\$ 371	\$ 78	\$ 293	\$ ---	\$ ---	\$ ---
Franklin	1,327.00	7.231	\$ 141,027	\$ 58,950	\$ 82,077	\$ ---	\$ ---	\$ ---
Giles	1,513.45	2.798	\$ 54,570	\$ 523,001	\$ 468,431	\$ ---	\$ ---	\$ ---

TABLE 47 (continued)

Counties (continued)	Pole-Line Miles Number	Allocation of Estimated Taxes Per cent	Actual Taxes Paid	Change in Revenue	
				Loss	Gain
Grayson	780.07	4.251%	\$ 82,908	\$ 39,776	\$ 43,132
Henry	877.05	4.779	23,205	62,690	-\$ 30,515
Montgomery	675.34	3.681	71,791	40,892	-\$ 30,899
Nelson	194.97	1.062	20,712	8,726	-\$ 11,986
Patrick	876.92	4.778	93,186	23,243	-\$ 69,943
Pittsylvania	207.81	1.132	22,078	6,973	-\$ 15,105
Pulaski	585.95	3.193	62,273	155,390	\$ 93,117
Roanoke	626.87	3.416	66,623	49,601	-\$ 17,022
Russell	860.90	4.691	91,489	581,130	\$ 489,641
Scott	865.68	4.778	92,016	67,663	-\$ 24,353
Smyth	709.37	3.865	75,380	71,677	-\$ 3,703
Tazewell	873.73	4.761	92,854	68,587	-\$ 24,267
Washington	900.47	4.906	95,682	122,404	-\$ 26,722
Wise	196.16	1.069	20,849	10,374	-\$ 10,475
Wythe	720.67	3.928	76,608	45,652	-\$ 30,956
Totals	18,353.61	100.000%	\$ 1,950,315	\$ 2,523,160	\$ 624,234

situs method should be considered. However, revenues generated within a locality afford some indication that those who pay the fees for utility services, and thus provide the funds for the payment of ad valorem taxes, are not necessarily the same ones who benefit from such taxation. Accordingly, some consideration of revenues generated is in order. It was observed, however, that the consumption of utility services is not necessarily a good measure of the need for local government services; therefore, consideration of some consumption unit, such as the watt-hour meter, was found desirable. Finally, heavy investment in transmission facilities, resulting frequently in little or no burden upon the resources of the various localities, would permit certain counties to participate unduly in allocated ad valorem taxes. To partially overcome this objection a consideration of pole-line miles, including both transmission and distribution facilities, was introduced.

From the foregoing discussion, it would appear that no one factor used alone would give a fair allocation of centrally collected public service corporation ad valorem taxes to any one locality in which a company operates.⁵ Therefore, it is suggested that a composite

⁵ This apparently is the conclusion of the U.S. Supreme Court in regard to interstate allocation of railroad values. See Rowley v. Chicago and Northwestern Ry. Co., 293 U.S. 102 (1934); Union Tank Line v. Wright, 249 U.S. 275 (1919).

of a number of factors may compensate for the weaknesses of any one factor. However, in arriving at an allocation system which is fair to both the utilities and the various taxing districts, certain criteria must be given consideration.

First, the composite formula chosen must meet the test of legality. Court cases, in the allocation of interstate railroad values, are not particularly helpful in answering the question of legality of intrastate allocation. Although no rules have been laid down by the courts, apparently any method of allocation will meet the test of legality as long as gross discrimination is absent.⁶

Second, the concept of equity dictates that the composite method selected, even though it might meet the test of legality, be possessed with reasonableness. This, of course, is the reason for selecting a composite rather than continuing with the present system based on one factor alone. Finally, consideration should also be given to the convenience and accuracy with which the required data can be obtained from the public service corporations.

As was observed in the discussion of the various factors herein considered, each factor has certain

⁶"The net result of the cases is that any fair method of apportionment will be sustained. . . ." See Adams County v. Northern Pacific Ry. Co., 115 F. 2d 768, 782 (1940).

weaknesses. It seems reasonable, therefore, to construct an allocation formula in which one factor reasonably compensates for the inadequacies of the others. Since allocation is essentially an arbitrary process, the question arises as to what type of factors should be included in the composite. To this end, the following table (Table 48) lists the factors suggested in a number of composites for the interstate allocation of railroad values.

TABLE 48

ALLOCATION FACTORS--COMPOSITES FOR INTERSTATE
ALLOCATION OF RAILROAD VALUES

Composite A	Composite B	Composite C
All-track mileage	All-track mileage	All-track mileage
Reproduction cost	Average: road mileage and reproduction cost	Average: road mileage and reproduction cost
Car- and locomotive-miles	Car- and locomotive-miles	Car- and locomotive-miles
Traffic units	Traffic units	Traffic units
Gross receipts	Gross receipts	Average: tons of originating and terminating traffic

⁷ Taxation of Public Service Corporations in Virginia, report of the Public Service Tax Study Committee, Commonwealth of Virginia, November, 1947, Table 9, p. 60.

It is observed in Table 48 and from an analysis of additional composites suggested in the committee report just cited,⁸ that each composite includes not only one or more property factors but also one or more operating or business factors. Following this idea, the composite to be illustrated in this thesis, for the allocation of centrally collected taxes imposed on one public service corporation as an example, includes the following factors: investment-situs, company revenues generated, watt-hour meters and pole-line miles. For ease in computation equal weights have been assigned to each factor.

Plan A--no adjustment for local effort. Under this plan each of the four abovementioned factors is numerically added for each of the various taxing districts. This total is then divided by the number of factors to obtain an arithmetic mean for each locality, totaling to 100 per cent for all of the counties and cities. Thus, each locality would receive full benefit in the composite for each of the various factors, regardless of the local effort being made in that locality. The results of this plan are illustrated in the following three tables. Table 49 shows the computation of the composite for each of the counties and cities served by one electric power

⁸ Ibid., pp. 58-59.

TABLE 49
COMPUTATION OF COMPOSITE ALLOCATION FACTOR, NOT
ADJUSTED FOR LOCAL EFFORT

	Investments ^a (Per Cent)	Revenues ^b (Per Cent)	Watt-Hourc Meters (Per Cent)	Pole-Lined Miles (Per Cent)	Total Per Cent	Composite Factor (Average)
Cities						
Danville	.4866	3.03%	.004%	.004%	3.53%	.883%
Galax	.339	1.350	.926	.224	2.839	.710
Lynchburg	3.515	8.564	8.176	.993	21.248	5.312
Martinsville	.234	1.454	.043	.083	1.814	.454
Radford	.015	.873	.001	.003	.892	.223
Roanoke	5.986	13.821	14.879	1.584	36.270	9.067
Counties						
Albemarle	.482	.874	.698	1.281	3.335	.834
Amherst	1.093	1.528	2.368	3.084	8.073	2.018
Appomattox	.001	.001	.002	.003	.007	.002
Bedford	1.560	2.845	2.292	4.879	11.576	2.894
Bland	.577	.467	.829	1.859	3.732	.933
Boutetourt	.872	2.525	1.491	1.925	6.813	1.703
Buchanan	1.560	4.023	4.429	4.387	14.399	3.600
Buckingham	.053	.001	.002	.036	.092	.023
Campbell	.734	1.559	2.202	2.004	6.429	1.625
Carroll	2.959	4.024	3.286	5.873	16.142	4.036
Craig	.056	.147	.236	.159	.598	.150
Dickenson	1.548	2.247	2.492	3.402	9.689	2.422
Floyd	.898	.891	1.553	3.939	7.281	1.820
Fluvanna	.005	.019	.028	.019	.071	.018
Franklin	2.104	2.637	3.636	7.231	15.608	3.902
Giles	21.137	1.991	2.495	2.798	28.421	7.105
Grayson	.915	1.559	2.334	4.251	9.059	2.265

TABLE 49 (continued)

Counties (continued)	Investments ^a (Per Cent)	Revenues ^b (Per Cent)	Watt-Hour Meters (Per Cent)	Pole-Lined Miles (Per Cent)	Total Per Cent	Composite Factor (Average)
Henry	2.461%	4.524%	4.938%	4.779%	16.702%	4.175%
Montgomery	1.528	2.492	3.404	3.681	11.105	2.776
Nelson	1.421	1.999	1.590	1.062	3.072	1.768
Patrick	1.065	1.595	2.150	4.778	9.588	2.397
Pittsylvania	1.479	1.290	2.263	1.132	2.164	1.541
Pulaski	5.475	3.344	4.080	3.193	16.092	4.023
Roanoke	3.029	7.036	6.435	3.416	19.916	4.979
Russell	28.520	3.202	2.749	4.691	39.162	9.790
Scott	1.603	2.135	3.185	4.718	11.641	2.910
Smyth	2.399	0.266	4.217	3.865	18.747	4.687
Tazewell	1.930	4.180	5.508	4.761	16.379	4.095
Washington	2.090	2.558	4.019	4.906	13.573	3.393
Wise	1.303	2.509	1.915	1.069	2.796	1.699
Wythe	1.568	2.431	3.145	3.928	11.072	2.768
Totals	100.000%	100.000%	100.000%	100.000%	400.000%	100.000%

a See Table 44.

b See Table 45.

c See Table 46.

d See Table 47.

company. A comparison of the composite factor with the investment factor shows that the two counties and one city, Giles and Russell counties and Roanoke City, with the greatest proportion of this company's investment located therein continue to reap the greatest benefits under the composite method. Roanoke City shows a substantial gain, influenced primarily by its larger proportion of revenues generated and watt-hour meters. Giles and Russell counties, on the other hand, show a significant decline in their relative participation, reflecting the unfavorable influence of all the factors other than investment. The extent to which the use of the composite allocation factor would result in changes in tax revenues to the localities is shown in tables 50 and 51.

Table 50 uses the contrived composite allocation factor to allocate one utility's 1959 taxes if these taxes had been computed by means of centralized assessment at 40 per cent of full value and a tax levy of \$1,950,315 reflecting a statewide average rate of levy. Although the total tax bill of this company would have been reduced from \$2,523,160 to \$1,950,315, resulting in a like reduction in tax revenues accruing to the various cities and counties, it is significant to note that the composite allocation factor used, which considers bases other than investment-situs, results in gains in tax revenue to five of the six cities and twenty-two of the thirty-one counties. The

TABLE 50

ALLOCATION OF A SOUTHWESTERN VIRGINIA POWER COMPANY'S 1959 PROPERTY TAXES, COMPUTED ON THE STATEWIDE AVERAGE RATE TO LOCALITIES USING COMPOSITE ALLOCATION FACTOR, NOT ADJUSTED FOR LOCAL EFFORT

CITIES	Composite Factor (Average)	Allocation of Estimated Taxes		Actual Taxes Paid	Change in Revenue Gain	
		Taxes	Taxes		Loss	Gain
Danville	.883%	\$ 17,221	\$ 12,025	\$ 14,813	\$ 966	\$ 5,196
Galax	.710	13,847	14,813	14,813	---	---
Lynchburg	5.112	103,601	72,901	72,901	30,700	5,709
Martinsville	.454	8,854	3,145	3,145	---	4,108
Radford	.223	4,349	241	241	---	55,741
Roanoke	9.067	176,836	121,095	121,095	55,741	---
Counties						
Albemarle	.834	16,266	13,333	13,333	---	2,933
Amherst	2.018	39,357	29,432	29,432	---	9,925
Appomattox	.002	39	12	12	---	27
Bedford	2.894	56,442	32,353	32,353	24,089	---
Bland	.933	18,196	19,583	19,583	1,392	7,829
Botetourt	1.703	33,214	25,385	25,385	30,484	---
Buchanan	3.600	70,211	39,727	39,727	359	---
Buckingham	.023	449	808	808	14,967	15,663
Campbell	1.625	31,693	16,030	16,030	1,584	---
Carroll	4.036	78,715	93,682	93,682	20,340	12,631
Craig	.150	2,925	1,341	1,341	---	273
Dickenson	2.422	47,237	67,577	67,577	58,950	17,151
Floyd	1.820	35,496	22,865	22,865	---	---
Fluvanna	.018	351	78	78	---	---
Franklin	3.902	76,101	58,950	58,950	---	---

TABLE 50 (continued)

Counties (continued)	Composite Factor (Average)	Allocation of Estimated Taxes	Actual Taxes Paid	Change in Revenue	
				Loss	Gain
Blacksburg	7.105%	\$ 138,570	\$ 523,001	\$ 384,431	\$ 4,399
Blacksburg	2.265	44,175	39,776	---	18,736
Blacksburg	4.175	81,426	62,690	---	13,249
Blacksburg	2.776	54,141	40,892	---	6,252
Blacksburg	7.768	14,978	8,726	---	23,506
Blacksburg	2.397	46,749	23,243	---	3,578
Blacksburg	0.541	10,551	6,973	---	76,929
Blacksburg	4.023	78,461	155,390	47,505	---
Blacksburg	4.979	97,106	49,601	390,130	---
Blacksburg	9.790	190,936	56,754	390,194	---
Blacksburg	2.910	56,754	67,663	10,909	---
Blacksburg	4.687	91,411	71,677	19,734	---
Blacksburg	4.095	79,865	68,587	11,278	---
Blacksburg	3.393	66,174	122,404	56,230	---
Blacksburg	3.699	13,633	10,374	3,259	---
Blacksburg	2.768	53,985	45,652	8,333	---
Totals	100.000%	\$1,950,315	\$2,523,160	\$956,717	\$383,872

TABLE 51

ALLOCATION OF A SOUTHWESTERN VIRGINIA POWER COMPANY'S 1959
 PROPERTY TAXES, ACTUAL TAXES PAID USING COMPOSITE
 ALLOCATION FACTOR, NOT ADJUSTED FOR LOCAL EFFORT

	Composite Factor (Average)	Allocation of Actual Taxes	Actual Taxes Paid	Change in Revenue Gain	
				Loss	Gain
CITIES					
Danville	.8836	\$ 22,280	\$ 12,025	\$ ---	\$ 10,255
Galign	.710	17,914	14,813	---	3,101
Lynchburg	5.312	134,030	72,901	---	61,129
Martinsville	.454	11,455	3,145	---	8,310
Radford	.223	5,627	241	---	5,386
Roanoke	9.067	228,775	121,095	---	107,680
Counties					
Albemarle	834	21,043	13,333	---	7,710
Amherst	2.018	50,917	29,432	---	21,485
Appomattox	.002	50	12	---	38
Bedford	2.894	73,020	32,353	---	40,667
Bland	.933	23,541	19,588	---	3,953
Botetourt	1.703	42,969	25,385	---	17,584
Buchanan	3.600	90,834	39,727	---	51,107
Buckingham	.023	530	606	228	---
Campbell	1.625	41,001	16,030	---	24,971
Carroll	4.036	101,835	93,682	---	8,453
Craig	.150	3,785	1,341	2,444	---
Dickenson	2.422	61,111	67,577	6,466	---
Floyd	1.820	45,922	22,865	---	23,057
Fluvanna	.018	454	78	---	39,376
Franklin	3.902	98,454	58,950	---	39,504

TABLE 51 (continued)

Counties (continued)	Composite Factor (Average)	Allocation of Actual Taxes	Actual Taxes Paid	Change in Revenue Gain	
				Loss	Gain
Giles	7.105	\$ 179,271	\$ 523,001	\$ 343,730	\$ ---
Grayson	2.265	57,150	39,776	---	17,374
Henry	4.175	105,342	62,690	---	42,652
Montgomery	2.776	70,043	40,892	---	29,151
Nelson	7.768	19,378	8,726	---	10,652
Patrick	2.597	60,480	23,243	---	37,237
Pittsylvania	5.541	13,650	6,973	---	6,677
Pulaski	4.023	101,507	155,390	53,883	---
Roanoke	4.979	125,628	49,601	---	76,027
Russell	9.790	247,017	581,130	334,113	---
Scott	2.910	73,424	67,663	---	5,761
Smyth	4.687	118,261	71,677	---	46,584
Tazewell	4.095	103,323	68,587	---	34,736
Washington	3.393	85,611	122,404	36,793	---
Wise	6.699	17,637	10,374	---	7,263
Wythe	2.763	69,841	45,652	---	24,189
Totals	100.000%	\$2,523,160	\$2,523,160	\$775,213	\$775,213

loss in revenue which would have been sustained by the remaining city and counties is compounded by both the lower rate of tax levy and also the use of the composite allocation factor.

Even if the statewide average rate of tax levy, which on the whole is shown to be lower than the local rates prevailing in the cities and counties served by this company, is not used and the actual taxes paid by the company allocated on the basis of the composite allocation factor, a substantially similar result would be obtained, as shown in Table 51. The utility's tax bill would remain constant at \$2,523,160; however, each of the cities would have shown a gain in tax revenue, as would twenty-five of the thirty-one counties. Once again, the burden of revenue loss would be borne by those localities which are presently enjoying advantages directly ensuing from the location of utility investment therein.

Plan B--adjusted for local effort. The above method would allow each locality to fully participate in the allocation process although providing little or no incentive to the localities to improve their own assessment practices. In fact, it may well have the opposite effect. The localities suffering losses in revenue may retaliate, for example, by further reducing the local assessment ratio and increasing the local rate of levy. These changes could be effected in such a way as to cause no change in the tax

burden on nonutility property owners within the locality; however, to the extent that their levy rates are included in the statewide average, and to the extent that they push the statewide average upward, the total tax bill of the public service corporations would be increased. One possible way of preventing this would be to include some consideration of local effort in the computation of the composite allocation factor.

Table 52 shows the computation of the composite allocation factor giving consideration to local effort. First, the total composite per cents for each locality were computed, being the sum of each locality's relative percentage of investment, company operating revenues generated, company watt-hour meters, and company pole-line miles. Second, the assessment ratio for each city and county was listed as a percentage of 40 per cent, the assessment ratio imposed on public service corporation property. This percentage was then applied against the total composite per cents to obtain a total composite per cent for each locality adjusted for local effort. Where a locality's local assessment ratio was already 40 per cent or greater, no adjustment was made; however, to the extent other localities are penalized by this method, the cities and counties making substantial local effort would tend to participate to a greater degree in the allocation process. This is illustrated in tables 53 and 54.

TABLE 52

COMPUTATION OF COMPOSITE ALLOCATION FACTOR,
ADJUSTED FOR LOCAL EFFORT

Titles	Total Composite Per Cents ^a	Local Assessment Ratios of 40	Per Cent ^b	Adjusted		Composite Factor ^d Adjusted
				Total Per Cents ^c	Per Cents ^c	
Danville	3.533%	100.0%		3.533%	2.130%	
Galax	2.839	35.5		1.008	.603	
Lynchburg	21.248	100.0		21.248	12.812	
Martinsville	11.314	100.0		1.814	1.094	
Radford	•892	80.0		•714	•431	
Roanoke	36.270	83.5		30.285	18.261	
Counties						
Albemarle	3.335	30.2		1.007	.607	
Amherst	8.073	35.2		2.842	1.715	
Appomattox	•007	58.0		•004	.002	
Bedford	11.576	40.8		4.723	2.840	
Bland	3.732	33.2		1.239	.747	
Botetourt	6.813	37.2		2.534	1.528	
Buchanan	14.399	28.2		4.061	2.449	
Buckingham	•092	68.5		•063	.038	
Campbell	6.499	51.5		3.347	2.018	
Carroll	16.142	21.0		3.390	2.044	
Craig	•598	53.2		•318	.192	
Dickenson	9.689	25.0		2.422	1.460	
Floyd	7.281	54.8		3.990	2.406	
Fluvanna	•071	44.8		•032	.019	
Franklin	15.608	32.8		5.119	3.087	
Giles	28.421	33.5		9.521	5.741	
Grayson	9.059	21.2		1.921	1.158	

TABLE 52 (continued)

Counties (continued)	Total Composite Per Cents ^a	Local Assessment Ratios As A Per Cent of 40 Per Cent ^b	Adjusted Total Per Cents ^c	Composite Factor Adjusted
Henry	16.702%	27.5%	4.593%	2.770%
Montgomery	11.105	33.2	3.687	2.223
Nelson	3.072	61.5	1.889	1.139
Patrick	9.588	39.5	3.787	2.284
Pittsylvania	2.164	51.2	1.108	.668
Pulaski	16.092	34.5	5.552	3.346
Roanoke	19.916	66.0	13.145	7.926
Russell	39.162	21.2	8.302	5.006
Scott	11.641	21.2	2.468	1.488
Smyth	18.747	20.8	3.899	2.351
Tazewell	16.379	28.0	4.586	2.765
Washington	13.573	16.2	2.199	1.326
Wise	2.796	38.8	1.085	.654
Wythe	11.072	39.8	4.407	2.657
Totals	400.000%	165.842%	100.000%	<u><u><u></u></u></u>

^aSee Table 48.^bUsing 1956 assessment ratio study, Virginia Department of Taxation.^cProduct of (a) and (b); where local assessment ratio is already in excess of 40 per cent, no adjustment is made.

Adjusted total per cents reduced to 100 per cent.

TABLE 53

ALLOCATION OF A SOUTHWESTERN VIRGINIA POWER COMPANY'S 1959 PROPERTY TAXES, COMPUTED ON THE STATEWIDE AVERAGE RATE TO LOCALITIES USING COMPOSITE ALLOCATION FACTORS, ADJUSTED FOR LOCAL EFFORT

Cities	Composite Factor (Average)	Allocation of Estimated Taxes	ACTUAL Taxes Paid		Change in Revenue Gain	
			\$	12,025	\$	\$ 29,517
Danville	2.130%	\$ 41,542	14,813	2,955	176,973	---
Galax	.608	11,858	72,901	---	18,191	---
Lynchburg	12.812	249,874	3,336	---	8,165	235,052
Martinsville	1.094	21,336	3,145	---	---	8,165
Radford	1.431	8,406	241	---	---	8,165
Roanoke	18.261	356,147	121,095	---	---	235,052
Counties						
Albemarle	607	11,838	13,333	1,495	4,016	---
Amerst	1.715	33,448	29,432	---	27	27
Appomattox	1.002	55,545	32,353	---	23,192	---
Bedford	2.848	14,569	19,588	5,019	4,416	4,416
Bland	.747	29,801	25,395	---	8,036	8,036
Botetourt	1.528	47,763	39,127	---	---	---
Buchanan	2.449	741	808	67	23,327	23,327
Buckingham	.038	39,357	16,030	53,818	---	---
Campbell	2.018	39,864	93,682	2,404	2,404	2,404
Carroll	2.044	3,745	1,341	---	---	---
Craig	.192	28,475	67,577	39,102	24,060	24,060
Dickenson	1.460	46,925	22,865	---	293	293
Floyd	2.406	371	73	---	1,256	1,256
Fluvanna	.019	60,206	58,950	---	---	---
Franklin	3.087					

TABLE 53 (continued)

Counties (continued)	Composite Factor (Average)	Allocation of Estimated Taxes	Actual Taxes Paid		Change in Revenue Loss Gain	
			\$	¢	\$	¢
Giles	5.741	\$111,967	\$23,001		\$11,034	\$
Grayson	1.158	22,585	39,776		17,191	---
Henry	2.770	54,024	62,690		8,666	---
Montgomery	2.223	43,356	40,892		2,464	---
Nelson	1.139	22,214	8,726		13,488	---
Patrick	2.284	44,545	23,243		21,302	---
Pittsylvania	•668	13,023	6,973		6,055	---
Pulaski	3.348	65,296	155,390		90,094	---
Roanoke	7.926	154,582	49,601		104,981	---
Russell	5.006	97,633	58,130		483,497	---
Scott	1.488	29,021	67,663		38,642	---
Smyth	2.351	45,852	71,677		26,825	---
Tazewell	2.765	53,926	68,587		14,661	---
Washington	1.326	25,861	122,404		96,543	---
Wise	•654	12,755	10,374		2,381	---
Wythe	2.657	51,820	45,652		6,168	---
Totals	100.000%	\$1,950,315	\$2,523,160		\$715,764	

TABLE 54

ALLOCATION OF A SOUTHWESTERN VIRGINIA POWER COMPANY'S 1959 PROPERTY TAXES, ACTUAL TAXES PAID USING COMPOSITE ALLOCATION FACTOR, ADJUSTED FOR LOCAL EFFORT

Cities	Composite Allocation Factor (Average)	Allocation of Actual Taxes	Actual Taxes Paid		Change in Revenue Loss	
			Taxes	Paid	\$	\$
Danville	2.130%	\$ 53,743	\$ 12,025	\$	---	\$ 41,718
Ga.ans	1.608	\$ 15,341	\$ 14,313	\$	---	\$ 528
Lynchburg	12.812	323,267	72,904	\$	---	250,366
Marionsville	1.094	27,603	3,145	\$	---	24,458
Radford	1.431	10,875	244	\$	---	10,634
Roanoke	18.261	460,754	121,095	\$	---	339,659
Counties						
Albemarle	607	15,316	13,333	\$	---	\$ 1,983
Amherst	1.715	43,272	29,432	\$	---	13,840
Appomattox	1.002	50	12	\$	---	38
Bedford	2.843	71,860	32,353	\$	---	39,507
Bland	1.747	18,848	19,588	\$	---	740
Botetourt	1.528	38,554	25,385	\$	---	13,169
Buckingham	2.449	61,792	35,727	\$	---	22,065
Buckingham	1.038	9,959	808	\$	---	151
Campbell	2.018	50,917	16,030	\$	---	34,887
Carroll	2.044	51,573	93,632	\$	---	42,109
Craig	1.192	4,845	1,341	\$	---	3,504
Dickenson	1.460	36,838	67,577	\$	---	30,739
Floyd	2.406	60,707	22,365	\$	---	37,842
Fluvanna	1.019	479	78	\$	---	401
Franklin	3.087	77,890	58,950	\$	---	18,940

TABLE 54 (continued)

Counties (continued)	Composite Factor (Average)	Allocation of Actual Taxes		Actual Taxes Paid	Change in Revenue Gain	
		Actual	Taxes Paid		Loss	Gain
Giles	5.7415	\$ 144,855	\$ 144,855	\$ 523,004	\$ 378,146	\$ ---
Grayson	1.158	29,218	29,218	32,776	10,558	\$ ---
Henry	2.770	69,892	69,892	62,690	---	7,202
Morgan	2.223	56,090	56,090	40,892	---	15,198
Nelson	1.139	28,739	28,739	8,726	---	20,013
Patt. Crk	2.284	57,629	57,629	23,243	---	34,386
Perry	6.668	16,055	16,055	6,973	9,882	\$ ---
Pulaski	3.348	84,475	84,475	155,350	70,215	\$ ---
Roanoke	7.926	199,986	199,986	49,601	---	150,385
Russell	5.006	126,309	126,309	58,430	454,824	\$ ---
Scott	1.488	37,545	37,545	67,663	30,118	\$ ---
Smyth	2.351	59,320	59,320	71,677	12,357	\$ ---
Tazewell	2.765	69,765	69,765	60,587	1,178	\$ ---
Washington	1.326	33,457	33,457	122,404	88,947	\$ ---
Wise	1.654	16,502	16,502	10,374	6,128	\$ ---
Wythe	2.657	67,040	67,040	45,652	21,388	\$ ---
Totals	100.000%	\$2,523,160	\$2,523,160		\$1,119,450	\$1,119,450

Table 53, based upon a tax bill of \$1,950,315, in 1959, reflecting the use of a statewide average rate of levy, shows the extent to which losses would have been incurred by cities and counties with inordinantly low assessment ratios. It should be noted that the losses shown are intensified by the fact that the total tax bill of the company would have been substantially less than that had local rates been applied. Of the total losses in revenues, 92.3 per cent would have been borne by those localities with an assessment ratio less than 12 per cent of full value, while 93 per cent of all gains to the cities and counties would have accrued to those localities with assessments over 20 per cent of full value.

Table 54 shows the allocation of actual taxes paid, in 1959, by the company, using the composite allocation factor adjusted for local effort. This eliminates the consideration of losses due to the use of a statewide average rate of levy lower than that prevailing in the localities served by this company. Once again, it is noted that of the total losses in revenues suffered by certain localities, which are exactly offset by gains in others, 100 per cent would have been borne by localities with assessment ratios less than 14 per cent, while cities and counties with assessment ratios over 20 per cent would participate in 82.5 per cent of the total gains.

This would seem to indicate that Plan B is possessed of a certain advantage over Plan A, particularly in that

it would encourage the localities to increase their assessment ratios and make a more pronounced local effort. However, the penalties and rewards may not be in themselves sufficient to result in the action necessary to achieve the improved local effort. Perhaps legislative action would be necessary to reach that objective, without subjecting the allocation of utility taxes to unnecessary complication. Table 55 illustrates how ineffectual the adjustment for local effort might be.

The bulk of the rewards for improving local assessment ratios would accrue to the cities where currently the assessment ratios are already close to or in excess of 40 per cent. This device, then, would not further encourage these localities; this is also true, although to a more limited extent, in the case of all cities and counties which would show such gains. The average assessment ratio for all cities and counties which would be rewarded for improving their assessment ratios up toward 40 per cent is already over 28 per cent.

Where this plan would do the most good is in the localities which would be penalized. The average assessment ratio for these localities is approximately 12 per cent; therefore, they would receive some inducement to improve their assessment practice. However, it should be noted that the average loss, or penalty, per locality would amount to only \$25,529 and, excluding the penalty which would fall on Russell County, an extreme, the

TABLE 55

ALLOCATION OF A SOUTHWESTERN VIRGINIA POWER COMPANY'S 1959 PROPERTY TAXES, ACTUAL TAXES PAID USING COMPOSITE ALLOCATION FACTOR, ADJUSTED FOR LOCAL EFFORT AND NOT ADJUSTED FOR LOCAL EFFORT COMPARED

Cities	Allocation of Actual Taxes		Allocation of Actual Taxes		Penalty
	Not Adjusted	Adjusted	Not Adjusted	Adjusted	
Danville	\$ 22,280	\$ 53,743	\$ 31,463	\$ 46,463	---
Galax	17,914	15,341	189,237	2,573	---
Lynchburg	134,030	323,267	16,148	---	---
Martinsville	11,455	27,603	5,246	---	---
Radford	5,627	10,875	231,979	---	---
Roanoke	228,775	460,754			
Counties					
Albemarle	21,043	15,316			5,727
Amherst	50,917	43,272			7,645
Appomattox	50	50			---
Bedford	73,020	71,860			1,160
Bland	23,541	18,848			4,693
Botetourt	42,969	38,554			4,415
Buchanan	90,834	61,792			29,042
Buckingham	580	959			---
Campbell	41,001	50,917	9,916	---	50,262
Carroll	101,835	51,573			---
Craig	3,785	4,845	1,060	---	24,273
Dickenson	61,111	36,838			---
Floyd	45,922	60,707	14,785	---	25
Fluvanna	454	479			---
Franklin	98,454	77,890			20,564

TABLE 55 (continued)

Counties	Allocation of Actual Taxes		Allocation of Actual Taxes		Reward	Penalty
	Not Adjusted ^a	Adjusted ^b	Not Adjusted ^a	Adjusted ^b		
Giles	\$ 179,271	\$ 144,855	\$ 29,218	\$ 29,218	\$ --	\$ 34,416
Grayson	57,150	69,892	69,892	69,892	\$ --	27,932
Henry	105,342	56,090	56,090	56,090	\$ --	35,450
Montgomery	70,043	28,739	28,739	28,739	\$ --	13,953
Nelson	19,378	60,480	57,629	57,629	\$ 2,851	\$ --
Patrick	13,650	101,507	16,855	16,855	\$ 3,205	\$ --
Pittsylvania	125,628	125,628	84,475	84,475	\$ 74,358	\$ 17,032
Pulaski	247,017	73,424	126,309	126,309	\$ 120,708	\$ --
Roanoke	118,261	103,323	37,545	37,545	\$ 35,879	\$ --
Russell	85,611	85,611	59,320	59,320	\$ 58,941	\$ --
Scott	17,637	69,841	69,841	69,841	\$ 33,558	\$ 1,135
Smyth	67,040	67,040	33,457	33,457	\$ 52,154	\$ 2,801
Tazewell			16,502	16,502		
Washington			67,040	67,040		
Wise						
Wythe						
Totals	\$2,523,160		\$2,523,160		\$587,164	

^a See Table 51.
^b See Table 54.

average loss of potential revenue would amount to but \$21,203. Considering the relatively large size of city and county budgets, this penalty, although annoying, would in all probability be insufficient to give rise to any substantial overhaul of the assessment practice.

Centralized Assessment and Allocation
for Local Taxation

There probably would be some question as to the acceptability of a scheme of taxation on public service corporation property as has been presented in the preceding section. Utility property is currently being assessed by the Virginia State Corporation Commission and the assessed values so obtained are allocated back to the localities on the basis of situs. Therefore, there is precedent for this sort of central participation. To subject the public service corporation property to centralized taxation as well, relieving the cities and counties of this function, although achieving a greater degree of equity, would probably be distasteful to the various localities, just as increased centralization of federal governmental activities is repugnant to some people.

Further, there can be raised some question of constitutionality. The Virginia Constitution, as do most state constitutions, provides for uniform taxation among the various classes of property. To centrally assess and tax public service corporations would be paramount to

achieving uniformity in taxation among one class of taxpayer, rather than between all classes of property.

Although the goal of such a scheme is to effect a more equitable tax climate, it may well require a constitutional amendment to be implemented.

For these reasons, it is necessary to offer some alternative to centralized taxation which currently falls within the Constitution and which might be less objectionable to the localities who fear the accumulation of power "in Richmond." As has been noted, there is precedent for centralized assessment of utility property and allocation to the localities of the assessed values so obtained. The same principles which were discussed in relation to the allocation of centrally collected levies can be equally applicable to the allocation of assessed values centrally ascertained. A composite allocation factor, similar to the ones computed in tables 49 and 52, could be applied in the allocation of assessed values to the cities and counties, while allowing these localities to continue to impose local rates of levy on the allocated assessed values. The composite allocation may or may not be adjusted to reflect local effort; however, it would seem desirable to encourage, or even require, the localities to increase local assessment ratios in this case.

In the case of centralized assessment and taxation, improved local effort is desirable; however, low assessment ratios coupled with high tax rates would be offset

to some extent by the consideration of localities with high assessment ratios and low tax rates in the computation of the statewide average rate of taxation to be imposed on the assessed values of public service corporation property. Where the localities are left to their own devices, even the use of a composite allocation factor in allocating assessed values to the cities and counties would fail in purpose in that it would so encourage these localities to lower their assessment ratios still lower and to raise their levy rates still higher.

For reasons stated previously, it appears doubtful that an adjustment of the composite allocation factor to reflect local assessment ratios would prove a sufficient inducement to the localities to improve their assessment practices. Accordingly, a stronger and perhaps statutory device must be devised requiring the localities to raise their assessment ratios to some minimum level, such as the 40 per cent ratio currently imposed on utility property, at the risk of losing some portion of state aid to education, to cite one example.

Summary

The fact that a public service corporation, as an economic unit, frequently serves more than one city or county differentiates it somewhat from the nonutility property owner and taxpayer. This is not to imply that the public service corporations should bear a more or less

onerous share of the total tax burden; rather, it means that to assure that they bear an equitable share of the tax burden it may be necessary to examine more closely the existing methods of taxation and to search for other ways in which this goal may be achieved.

One way, with some variations thereof, has been discussed in this chapter. In general, the method considers allocation to the various taxing districts of either centrally determined assessed values or centrally collected taxes imposed on utility property. The major innovation lies in the allocation process. For the reasons cited, allocation on the basis of situs alone leaves much to be desired; therefore, other means of allocation were considered, including company revenues generated, population, watt-hour meters, pole-line miles and a combination of bases. It was noted that each factor has inherent weaknesses standing alone, but that a composite formula selected for allocation purposes might compensate for the weaknesses of each separate factor.

The allocation procedures discussed in this thesis are included for illustrative purposes only, and may be subjected to modification in actual practice. Further, equal weight was afforded each factor although, for political or other purposes, certain factors, such as investment, may just as easily be given greater weight. It is felt, however, that probably no reasonable substitute

would give materially different results. It is strongly believed on the basis of this investigation that some composite allocation factor which gives consideration to factors in addition to investment should replace the present method.

CHAPTER 9

SUMMARY AND CONCLUSIONS

The purpose of this study has been to examine the ad valorem tax system in the Commonwealth of Virginia as to the possible discriminatory effects on public service corporations. Five general questions were investigated. First, is there any discrimination in the assessment administration and practice in Virginia? Second, if so, to what extent have the public service corporations suffered as a result of the assessment administration and practice? Third, auxiliary to the main theme of this study, are there other possibilities for discrimination of public service corporations because of the fact that the value of utility property is not readily ascertainable? Fourth, if the problem of determining value of utility property can be disregarded, is there the possibility of further discrimination of utilities through the classification of their property as realty or personalty? Fifth, do any reasonable alternatives present themselves as corrections of existing discriminations?

SummaryIntroduction

The statistical device used to measure assessment inequality, the "coefficient of dispersion" or "coefficient of deviation," revealed that in certain areas in Virginia unusually high assessment inequalities prevailed. Using a coefficient of dispersion of 20 per cent as the standard for measuring assessment inequality, it was found further that Virginia is one of three states with an index greater than 40 per cent. This indicated that there was an assessment problem in Virginia worthy of further consideration.

Development of the property tax

First considered was the historical development of property taxation generally, including the problems inherent in the taxation of interstate commerce which in many cases evolved around the taxation of property versus the taxation of income. After considering property taxation in this light, attention was directed to the constitutional provisions and the present system of property taxation in Virginia as it has developed. Just how important property taxation has been was then considered and it was observed that property taxation continues to play a most important role.

Throughout the United States the property tax as a percentage of total state and local revenue declined in

importance, from 78 per cent, in 1927, to 45 per cent, in 1957. This reflects the withdrawal by many states from the property tax field and the substitution therefore of tax systems which are more productive, including the sales and income tax systems. The property tax is still the major source of local government revenue, accounting for over 85 per cent of all local government tax revenue nationally. Because of the importance of ad valorem taxes to the various local governments, both nationally and in Virginia, assessment administration and practice remains equally significant.

Assessment administration

Assessment administration is concerned with two basic problems. First, property subject to taxation must be located and placed on the tax rolls. Second, a reasonable valuation of such property must be made. It was noted that both of these problems are frequently complicated by the fact that not only are valuations difficult to make for all types of property but also the assessing office is frequently limited as to staff and operating funds.

As a result both of these internal limitations of the assessing function and of the fact that not all property within a given locality is assessed by the same office, unequal assessments within taxing districts and between taxing districts may give rise to discrimination in ad valorem taxation. If assessments which are not equal

result in inequities, then the alternative of uniform assessments must be followed to insure a greater degree of equity. In making uniform assessments, however, it was noted that certain problems remain. Should all assessments be made at "full value" or uniformly at some fraction of full value? The general conclusion was reached that from the point of view of uniformity it probably makes no difference; however, from the point of view of the fiscal powers and policies of local government, as well as of the best interests of property owners, assessments closer to full value seem more desirable.

The assessment practice in Virginia

First, some examination of the various assessment practices in Virginia revealed a variation in assessment ratios between the cities and counties. The coefficient of dispersion for the cities was found to be 25.8 per cent,¹ indicating relative uniformity in assessment therein at a median level of 36.0 per cent which, although not meeting the constitutional requirement of 100 per cent, compared favorably with the state assessment of public service corporation property at 40 per cent of full value. The median assessment for the counties, however, was almost half that of the cities, 18.3 per cent, and ranged to

¹Computed from data shown in Chapter 4, Table 9.

a low of 6.5 per cent in one county. Assured that some problem existed in Virginia, the next step was to examine the effects of the lack of uniformity on Virginia's public service corporations.

Data relative to one public service corporation and the area which it served was considered as illustrative of the problem existing in Virginia. First, it was found that assessing this company at 40 per cent of its fair value resulted in a tax burden of a half-million dollars over what it would have been had the statewide weighted average assessment ratio of 31.5 per cent been used.² Since the company examined serves only a portion of the state, the possible effect of assessing the company's property at the assessment ratio prevailing, on the average, in the company's operating service area was next considered. Using the same average rate of taxation which actually prevailed, in 1959, it was found that the use of the systemwide average assessment ratio would have resulted in a tax savings to the company of over one million dollars.³ Finally, it was observed that had the company been assessed, in 1959, at the average assessment ratios prevailing in the cities and counties considered separately instead of at the state-administered 40 per

²See Chapter 4, Table 10.

³See Chapter 4, Table 11.

cent level, the company would have saved almost 60 per cent of the actual taxes paid.⁴

It was also noted of the assessment practice in Virginia that not only are assessment ratios generally lower than that imposed on public service corporations property but also there existed considerable variation in the assessment ratio within localities. It was concluded from these data that the present assessment practice in Virginia subjects certain public service corporations to two kinds of discrimination. First, there is discrimination in the assessing of utility property at a ratio of full value higher than that which is imposed on non-utility property throughout the state. Second, an additional layer of discrimination exists as between public service corporations to the extent that one company may bear a larger proportion of the tax burden in a low-assessment service area than another utility operating in an area making a greater local effort to meet the costs of government through increased assessment ratios.

Additional data considered revealed that not only does a problem of discrimination currently exist but also that there has been a noticeable trend toward increasing discrimination over the years. In the service area of one public service corporation, for example, the average

⁴See Chapter 4, Table 12.

assessment ratio declined from 41.1 per cent, in 1936, to 18.9 per cent, in 1956, while the assessment ratio applied to utility property has remained constant at 40 per cent.⁵ Further, the average nominal rates of tax levy, which are applied equally to both utility and nonutility property assessed values, showed a significant increase during this same period of time, rising from \$1.87 per \$100 of assessed value to \$3.57 per \$100 of assessed value.⁶

The discrimination pointed out by these data takes two directions. First, as has been discussed, the public service corporations themselves are discriminated against. Second, and perhaps of greater importance, the consumers of the utility's services, particularly when the consume such services in a locality other than that in which the services are manufactured, must bear the burden of the cost of a local government which provides them few, if any, government services.

Finally, dividing the total taxes levied on both utility property and nonutility real estate by the assessed values of these properties, for the years 1954 and 1958, the average effective tax rate per \$100 of assessed valuation was determined. It was noticed that this rate, as applicable to nonutility real estate, rose from \$2.56 to

⁵See Chapter 4, Table 14.

⁶Ibid.

\$2.68, an increase of only 4.7 per cent. During the same period of time, however, the average effective rate of taxation on utility property rose from \$2.74 to \$3.06, an increase of 11.7 per cent, or more than double the increase on nonutility real estate. It was noted, further, that there are two apparent reasons for this discrepancy. First, certain counties, in which substantial utility property is located, tax personal property at a rate higher than that imposed on real estate. Where certain utility property is classified as personality, the comparison of the average effective tax rate on nonutility real estate must necessarily reveal differences. Second, more utility property of the company examined was located in localities with low assessment ratios and high rates of levy than in localities with high assessment ratios and low rates of levy.

Valuation, assessment and taxation
of public service corporation property

Although the major purpose of this study was to examine the assessment practice in Virginia for possible discriminations, it was noted that this is not the only way in which discriminations can be effected. To this point assessment at some percentage of "full value" has been the object of inquiry without consideration of the corollary problem of just what constitutes "full value."

Among the evidences of value considered for public service corporation property were original cost less

depreciation, depreciated replacement cost, capitalization of earnings, and market prices of stock and debt. For each evidence of value there is not only much which can be said in support of its use but also there is disagreement. Proponents of original cost (less depreciation) argue that much utility property has been acquired in recent years and, therefore, its cost represents a reasonable indication of market value. Opponents argue, among other things, that this method represents a summation of asset values which do not represent the value of all operating property taken as a whole unless intangible values are included. Reproduction cost, similarly a summation type of valuation, appears to be a useful method of valuation only when regulatory commissions consider reproduction cost in determining the base on which to set rates.

Indicative of the controversy surrounding the use of capitalized earnings as an evidence of value are the questions of income to be capitalized and rate of capitalization. Although no general agreement has been reached as to actual procedure, it is generally concluded that this evidence is worthy of consideration and that further study of its problems may well result in a more useful evidence of value. Considering market values of stock and debt as an evidence of value has been subject to even more criticism, mainly for three reasons. First, it is argued that

the market value of securities does not necessarily represent the market value of the assets for which these securities represent sources. Second, a relatively small percentage of the total securities outstanding are actually traded; therefore, it is argued that those securities actually traded are not necessarily representative of the value of securities not traded. Third, the objection is made that the market value of securities depends on the income allowed by the same regulatory agency which is making the assessment of ad valorem value. In spite of these objections, however, there appears to be some merit in considering market value of stock and debt as an evidence of value. As expressed in one report:

Anticipated future earnings discounted to their present worth are theoretically superior to stock and bond values, but the appraiser is not necessarily a better prophet than those who stake their money on their predictions of future earnings by buying and selling railroad securities and, even if the appraiser were an excellent judge of earning prospects, stock and bond values would have the advantage of being objective and would merit the support of those who believe that a little objectivity is worth a great deal of accuracy.⁷

At the present time, however, the problem of determining value of public service corporation property is a moot question in Virginia. Ad valorem values are determined in

⁷Carrier Taxation, p. 109. Cited in Committee on Unit Valuation, Appraisal of Railroad and Other Public Utility Property for Ad Valorem Tax Purposes (Chicago: Federation of Tax Administrators, 1954), p. 47.

this state by reducing original cost by approximately 20 per cent for depreciation, the depreciation allowance being determined by state studies irrespective of book reserves. Although as an evidence of value the Virginia method may be subject to question, it is not a major issue in Virginia at this time.

Classification and taxation of tangible personal property

Of some significance is the fact that not all states seek to tax personal property. Among the reasons found and examined, the difficulty of finding personal property stands out. That states generally are placing little emphasis on the taxation of personal property is evidenced by the fact that such property comprised only 17.4 per cent of the total tax base as recently as 1956.⁸

No clear definition of real estate as opposed to personal property readily presents itself, statutory distinctions being made by some states, judicial distinctions being made in others. In Virginia, no distinction is made, either by the Constitution or by the State Corporation Commission which is responsible for the assessment and classification of public service corporation property. Because the State Corporation Commission does not distinguish between the two, certain problems arise

⁸See Chapter 6, Table 23.

in connection with utility property when certain localities so distinguish. The problem is intensified, further, when localities impose different rates of taxation upon personality and realty.

The fact that the State Corporation Commission "equalizes" the assessment on utility property at a 40 per cent level determined by a study of real estate assessment ratios seems to have no effect on some localities which persist in classifying certain utility property as personality and, thus, subject to a higher rate of taxation. It was further observed that certain localities not only disregard the above but also go further to classify as personality certain utility property which, according to distinctions generally accepted, would be classified as real estate. The growing practice of arbitrarily classifying certain utility property as personality has resulted in a "rate of class discrimination" of .88¢ per \$100 of assessed value, in 1959, up from .36¢, in 1949, and indicating that there is a trend toward increasing arbitrary classification of utility property as personality.⁹

Reforms in the taxation of
public service corporations

Aside from the complete elimination of the ad valorem tax system, the route of reform can take three directions.

⁹See Chapter 6, Table 27.

First, efforts can be made to achieve greater equalization in the present assessment practice. Second, there is the possibility of centralized assessment and taxation, with a reallocation of funds so collected by the state to the various localities on some equitable basis. Third, there is the possibility of centralized assessment of public service corporation property and allocation of these assessed values to the various taxing districts on a more equitable basis than the present method of situs.

Greater equalization in the assessment practice.

Where there is a difference between assessment ratios applied to utility property and those applied to non-utility property, greater equalization can be achieved in two ways. First, the utility assessment ratio can be raised or lowered to the level of local ratios. Second, local nonutility ratios can be adjusted to the level at which utility property is assessed.

Where the utility assessment ratio is higher than local ratios generally, as is the case in Virginia, and it is desired to lower the utility ratio to a level more in keeping with nonutility rates, there is some question as to just what nonutility, local ratio to use. One possibility is to lower an individual company's assessment ratio to that which prevails in each county and city served by the company. Another possibility is to lower the utility ratio to that level which prevails, on the average,

in the company's operating service area. A third alternative is to lower the utility assessment ratio to the statewide average. As has been noted, this is essentially the procedure followed in Virginia; however, the statewide average used in Virginia is based on a study of real estate ratios conducted more than thirty years ago and does not reflect the average ratios existing today.

It was noted that the average assessment ratio in Virginia has steadily deteriorated over the years and that this reduction in the assessment ratio of many taxpayers, with an attendant reduction in ad valorem taxes, has resulted in greater reliance on federal and state aid to meet the costs of local government. An examination of the merits of raising local assessment ratios rather than lowering utility ratios revealed that this method would affect a general increase in the property tax base for future use by the localities without necessarily causing any change in present total tax bills.

Allocation of central levies. As a point of departure in the illustrating of this device, the assessment ratio on utility property was left at 40 per cent and the average statewide rate of levy was applied to this valuation to obtain the total tax bill of one company. Next examined were various methods of allocating this centrally collected levy.

The situs of investment basis would distribute these funds to the localities according to the dollar investment

of the company in each of the localities. This method is presently followed in Virginia, the only difference being that the individual taxing districts impose the levy directly upon the property so located within their jurisdiction rather than depend upon a state allocation made on the same basis. It was noted that to so allocate the central levy on this basis alone would be an improvement only in the sense that a uniform rate of levy was being employed.

Under a "revenues generated" basis the central levy would be allocated to the various localities on the basis of the percentage of total revenue a particular operating utility derived therefrom. This method would enable the localities which contribute relatively more to the utility's revenue to participate proportionately in the allocation of utility taxes, regardless of the location of utility property.

To overcome the objection that the "revenues generated" basis ignores to some extent the fact that there is no necessary correlation between revenues contributed by a locality to a utility and the financial needs of that locality to provide necessary government services, a "watt-hour meter" basis was considered. The watt-hour meter represents one customer, whether it be a small or large customer, thus minimizing the effects of industrial plants which consume huge quantities of power while requiring few employees and, consequently, few government services.

Finally, it was observed that the dollar investment of transmission line is considerably greater than the dollar investment of distribution line; however, the transmission lines usually traverse "open" land which is marginal in its income-producing capacity to the utility. On the other hand, the cost of distribution facilities is relatively small but is located in high income-producing localities. The use of a "pole-line mile" basis, which considers miles of line rather than the dollar cost of line, tends to lessen the inequalities which obtain from the sole use of the situs of investment basis.

Although each of these bases seems to prove inadequate as the basis of allocation when viewed alone, they do possess favorable characteristics. Therefore, it was suggested that a composite of a number of factors may compensate for the weaknesses inherent in any one factor. It was noted that there is nothing new in composite allocation factors; however, they have been used in the past primarily for allocation of railroad values between states rather than to allocate other utility property values between taxing districts of the same state. For simplicity in illustrating how the composite allocation factor might work in Virginia each factor was afforded equal weight in the formula, the various factors used being situs of investment, revenues generated, watt-hour meters and pole-line miles.

Under the first plan proposed, the composite allocation factor was the average of the percentages of one company's individual factors, reduced to a total of 100 per cent. This allocation factor would then enable the central agency so responsible to distribute the centrally collected utility taxes to the various localities. The distribution was illustrated using two total taxes of one company, those which would have been obtained by the application of the statewide average rate of levy and those which were actually paid, both for the year 1959. It was noted in these illustrations that, even keeping the company's tax bill at its 1959 actual level, 84 per cent of the localities served by that company would have gained in tax revenue, while over 87 per cent of the loss in revenues under this device would be borne by two counties in which there is sizeable investment of utility property.

This first plan would allow each locality to participate fully in the allocation process while providing little or no incentive to the localities to improve their own assessment practices. One way was then considered to include the localities' local effort in the computation of the composite allocation factor. It would be expected that consideration of local effort (local assessment ratio compared with the utility assessment ratio) would encourage many localities to increase their assessment ratios and make a more pronounced local effort. However, it

should be pointed out that in some cases the total effectiveness was subject to some question due to the insufficiency of the penalties and rewards of this plan.

Accordingly, it was concluded that legislative action might be necessary to achieve substantial uniformity of assessment ratios, or at least to insure minimum local assessment ratios at substantially the same level as the utility ratio.

Allocation of centrally assessed values for local taxation. Though the State Corporation Commission currently allocates centrally assessed values of utility property to the localities for local taxation, only the situs of investment allocation factor is used. Under the assumption that the same principles which were discussed in relation to the allocation of centrally collected levies can be equally applicable to the allocation of assessed values centrally ascertained, a composite allocation factor can again be computed. Similarly, this composite allocation factor may or may not be adjusted to reflect the level of local assessment ratios.

Conclusions

The examination of Virginia's property tax system in some detail plus research into the laws of other states, interviews with officials of several state and local governments, and readings in the literature of taxation have led to certain conclusions. Because of the many variables

which make our economy so complex, compounded by the passage of time and changes in the political and philosophical ideology, the conclusions set forth in this thesis represent but points of departure toward further study.

As to property taxation generally

The heterogeneity of property in today's economy precludes the taxation of just one type of property as might have been possible in a less complex economy. Because property takes so many forms and because, with the credit-economy of the present day, the ownership of property does not necessarily reflect the ability to pay taxes, it has become a peculiarity of our times to place increasing emphasis on the abilities of people to earn a reward for their efforts. No longer is property a measure of peoples' efforts; consequently, many governments have learned to seek support for their activities, not from property owners, but from people with the ability to earn rewards.

Although it may be somewhat of an over-simplification, it appears to this writer that taxation generally is composed of two elements: that which is intended to raise revenues for government activities and that which is intended to regulate or control. Since it seems that most governments, when seeking revenues, impose a tax on the productivity of persons and things, it follows that a tax which is not based on productivity is based on the desire for regulation. Since taxation of property is not geared

to productivity then one might conclude that the purpose of property taxation is to control or regulate private property. Although this is not the avowed purpose of property taxation it must be observed that this purpose is unwittingly accomplished by the retention of this system of taxation. Accordingly, it is concluded that property taxation generally could be abolished in favor of some scheme of taxation based on productivity.¹⁰

The solution, it must be admitted, is not quite so simple. The property tax is an old tax and would be hard to shed from our economic system. Further, it in fact does accomplish the purpose of providing local revenue to local governments, and does so with varying degrees of efficiency, most of which have been more or less adequate, and many of which have been more or less inequitable. The retention of the property tax, in any event, seems inevitable for the present; therefore prudence, being the better part of valor, dictates that efforts be made to make the existing system as equitable as possible.

¹⁰"Most thinkers in the field of taxation have come to believe that a fair basis for comparing tax burdens is to be found in an examination of the relationship existing between the net income enjoyed by the various classes or types of taxpayers and the respective taxes which each is called upon to contribute. This belief rests largely upon the acceptance of the principle of ability to pay as the determinant of justice in taxation." Dr. Stauffer, cited in Report of the Committee to Study the Burden of Taxes on Real Estate, General Assembly of Virginia, February 2, 1934, p. 40.

That the inadequacies of the general property tax and the inevitability of its retention have been unresolved problems for some time is indicated by the following quotation from a 1934 committee report to the Virginia General Assembly:

I believe that the greatest advance made in State taxation in the past has been in the line of getting away from the property tax regardless of income therefrom and basing taxation for the support of the government more and more upon the income of the subject taxed. A system of direct property taxation regardless of its income is a relic of bygone ages and should be discarded. In Virginia this system has been practically abandoned for raising revenue for State functions, but this "archaic and unsatisfactory" direct property tax is the basis of raising revenue for local government support.¹¹

That this "archaic and unsatisfactory" system of taxation still exists today in Virginia provided sufficient incentive for the present study.

As to the assessment of real estate

The Constitution of Virginia (Section 169) provides that real estate shall be assessed at its fair market value. For many years, the localities have failed to do this and in fact have actually assessed property at an increasingly lower rate of fair market value; thus, a practice has generally evolved which is counter to the constitutional provisions. If in the past the constitutional requirement has been honored more in the breach

¹¹ Ibid., p. 37.

than in the observance then public policy would seem to dictate that the Constitution be amended so that the practice will be legal, or else that the statutes be tightened to insure compliance. Though most of the existing inequities which arise from the current assessment practice would be corrected by strict compliance with the constitutional requirement of assessment at full market value, the more gross inequities would be substantially corrected if the constitutional requirements were lowered to some percentage of full value and rigidly enforced. In any case, any departure from a constitutional mandate will result in certain inequities and is to be strongly disapproved.

As to the assessment of public service corporation property

The physical properties of public service corporations are assessed annually by the Virginia State Corporation Commission under the Constitution and statutes of the state. After establishing public service corporation property values, generally original cost less an allowance for depreciation of approximately 20 per cent, the State Corporation Commission provides for the "equalization" of the locally-taxable physical property of public service corporations with the valuation levels on property assessed by local officials. The method most frequently used is to apply to utility property the state-wide average assessment ratio, found to have been

approximately 40 per cent many years ago and still used today.

This practice is defective for three reasons. First, it is a clear violation of the constitutional mandate for assessment at fair market value. Strict adherence to the Constitution would, however, preclude any equalization of utility property with other property as long as the localities continue to assess at some fraction of full value. Until this is corrected the lesser of two evils seems to be equalization at some fraction of full value for public service corporation property.

The second defect then resides in the equalization factor itself. Although the statewide average assessment ratio may have been found to be approximately 40 per cent at one time, assessment ratio studies conducted since the original adoption of this equalization factor indicate that it has declined materially. Thus, the attempt to equalize the assessment of public service corporation property meets with failure when the factor used in the equalization process is inadequate. To the extent that the equalization factor is inadequate as it is in Virginia then public service corporations are being discriminated against in violation of the constitutional provisions for uniformity. A side effect of the present equalization practice was also noted. Even if the statewide average assessment ratio were 40 per cent, the ratio applied to utility property, the wide variations in ratios

used to determine the average lead to unequal taxation of public service corporations which do not operate throughout the state. It was noted, for example, that all of Virginia's low-ratio localities are located in the southwestern section of the state. Therefore, the equalization of the property of public service corporations serving that area at the statewide average does not succeed in equalizing the assessment of these companies with the assessment of local property.

The third defect of the present 40 per cent equalization factor rests in the fact that it was determined by a study of real estate alone, since data relative to tangible personal property was both unavailable generally and unreliable when available. It is to be expected, however, that the effective average assessment ratio of this type of property is considerably less than that on real estate since so much of this property escapes taxation. Equalization of utility property on the basis of real estate studies alone does not consider the fact that considerable utility property is personalty. Thus, to the extent that personal property is actually assessed at some fraction of full value which is even less than the real property ratio, public service corporations are being further discriminated against.

As to the taxation of tangible personal property

The very nature of tangible personal property makes its assessment difficult in most cases. So much of it is capable of being, and in many cases actually is, concealed that some states have abandoned taxation of it entirely or have specifically listed certain items of personality, such as automobiles, as subject to taxation. Where certain items of personality are excluded from taxation, or are specifically included for taxation, inequalities necessarily result. It appears that little can be accomplished toward the goals of uniformity and equity in taxation by such a procedure.

In those states where personal property is loosely defined, as is the case in Virginia, there arises another kind of inequity. First, those who are honest enough to report all of their personality for tax purposes bear a disproportionate share of the tax burden at the relief of those taxpayers who intentionally or inadvertently fail to record their personality with the tax collector. Second, public service corporations, because of their regulation, must report all of their personality to the tax collector and are thus discriminated against to the extent that some substantial proportion of other such property is not taxed. The general conclusion is obtained, therefore, that the taxation of personal property should be abandoned as administratively unworkable and, consequently, inequitable.

As to the rate of tax levy

Conclusions as to the rate of tax levy imposed by the various localities on property are composed of two parts. First, it makes little difference what rate a particular locality imposes upon the assessed value of the property located therein, as long as all of the property is uniformly assessed, for there would be substantial uniformity in the taxation of those who benefit from the services of the local government. However, since the public service corporation is an economic entity serving a relatively large geographical area it appears that its property, taken as an economic unit, should be taxed at one rate, preferably reflecting some sort of average of the rates existing within its service area, whether a few counties and cities or the entire state.

The second conclusion as to the rates of levy obtains from the observation that in some localities different rates are imposed upon real estate and personal property. In all cases examined, the rate imposed upon personality was found to be higher than that imposed on realty. Presumably this stems from the desires of local tax collectors to in some way compensate for the fact that substantial personality escapes taxation, and that the effective assessment ratio on personality is considerably less than the real estate assessment ratio. Not only are those who do report their personality for taxation thus

further discriminated against but also there exists in Virginia yet another form of discrimination. The property of public service corporations is not classified by the central assessing agency into categories of personality and realty; therefore, arbitrary classifications have been made by the localities in which there is a higher rate on personality. To the extent that some utility real property is erroneously classified as personality, this places an inequitable burden upon the public service corporation. This inequity would be eliminated with the abandonment of taxation on personal property. However, as long as personal property continues to be taxed in Virginia, improper classification of property will continue to result in discriminatory taxation. It would seem that since public service corporation assessments are "equalized" by a factor obtained from the study of real estate ratios alone that equity would dictate that the rate of taxation so imposed should be restricted to the rate imposed on real estate locally.

As to recommendations

Recognition of existing inadequacies impels the search for improvements. The pressing need for reforms in the property tax system as presently administered was emphasized by one authority who wrote:

There are numerous . . . methods which might be considered for meeting some of the current and emerging jurisdictional problems. It is likely that there would

be considerable opposition to any of them. One thing that does seem to stand out rather clearly, however, is that revenue inadequacies, friction, and dissatisfaction with the property tax will markedly increase if we continue to try to muddle along under the present jurisdictional setup.¹²

A different method of allocating the tax revenues from public service corporations, and other large industries, can be espoused not only in the name of fairness to business enterprises, but also in the name of good government. To this end, several proposals were made in this thesis to partially overcome the present inadequacies of the property tax system in Virginia, while attempting to retain ad valorem taxation itself as a means of raising local revenue.

Of the proposals made one seems to stand out as injecting more fairness into the property tax structure in Virginia while maintaining an element of political appeal. The proposal calls for allocation of centrally assessed values of utility property, or of a centrally collected tax levy imposed on public service corporations, among the taxing districts on the basis of a composite allocation factor. This allocation factor could include situs

¹² Mabel Walker, Executive Director of the Tax Institute of Princeton, New Jersey, address before Local Government Workshop; Preview of Local Government 1960-1970, New York State Office for Local Government, Albany, New York, June 7, 1960.

of investment, gross operating revenues, length of line, and number of customers, in the case of electric power companies, and similar factors in the case of other public utilities. In addition, a device could be incorporated into this method which would encourage the localities to improve their own assessment practices. Such a method, if it provides certainty in taxation and is coupled with fairness and a desire for self-help on the part of the communities, will go a long way toward achieving compliance with constitutional provisions as well as providing a tax climate favorable to new investment and general economic growth.

The property tax is far from an ideal tax; few theorists would claim that it is even a very good tax. It is not clearly a benefit tax; it is not based on the ability to pay; and it tends to operate as a regressive tax. It is a traditional tax of great usefulness to local governments particularly, however, and it does have certain qualities which contribute to the financial stability and autonomy of local government.

Apart from the thorny problem of determining value, especially of public service corporations, the property tax has in the past shown a remarkable ineptitude for reasonable and equitable administration. Some progress has been made in appraisal technique; however, the appraisal of utility property and nonutility property continues to lack the uniformity necessary for equitable

taxation. Assessment administration, whether because of staff and fiscal problems or by design, has led to discriminatory taxation of public service corporations.

If the constitutional mandate of uniformity, and presumably equity, is to be followed, then a re-evaluation of the assessment practice as applied to utilities is mandatory. Aside from constitutional and statutory requirements, theoretical and practical considerations demand a degree of equality and equity in taxation which public service corporations in Virginia do not have today. One answer seems to lie in an improvement of the assessment practice and administration, an improvement which would make the ad valorem tax system in Virginia more productive, more reliable, and more equitable to all of those who must operate under it and who benefit from its existence.

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APPENDICES

APPENDIX A

COUNTIES IN VIRGINIA SERVED BY
APPALACHIAN POWER COMPANY, 1962.

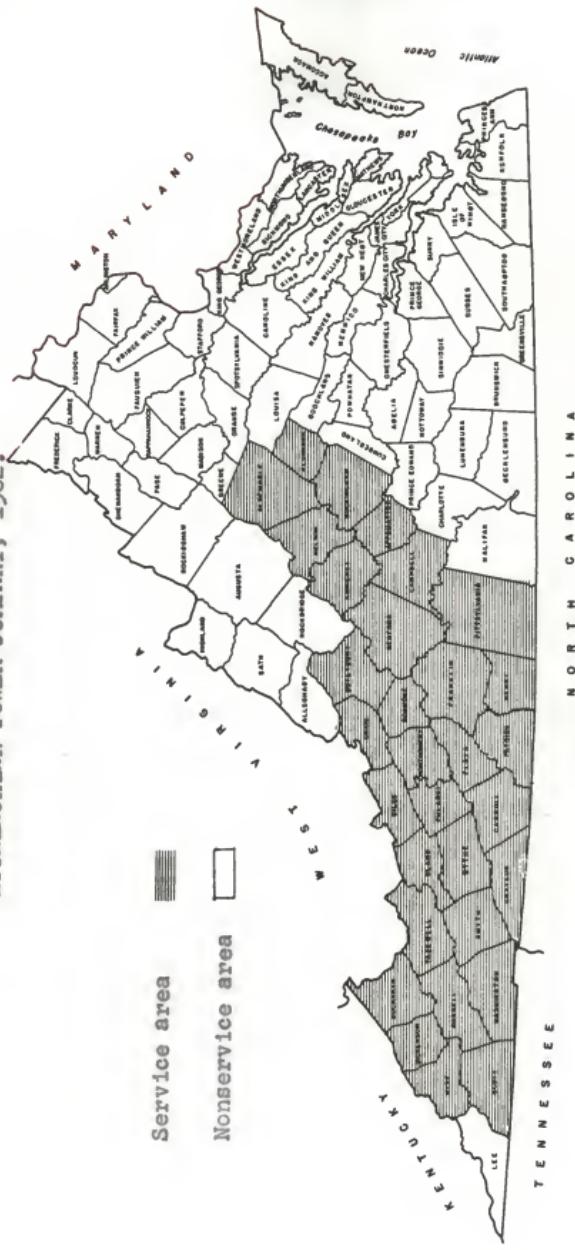


Figure 6

APPENDIX B

TABLE 56

PERCENTAGE OF ASSESSED VALUATION TO MARKET VALUE, REVENUE FROM LOCAL SOURCES AND REVENUE FROM LOCAL SOURCES AS A PER CENT OF TOTAL REVENUE, COMMONWEALTH OF VIRGINIA, YEAR ENDED JUNE 30, 1960

Assessment Groups	Counties by 1% through 10%	Percentage of Assessed Valuation To Market Value	Revenue from Local sources		Local Revenue as a Per Cent of Total Revenue
			Total ^b	Total ^b	
Carroll	8.4%	\$ 1,439,776	\$ 422,252		29.3%
Dickenson	10.0	1,691,378	533,811		31.5%
Grayson	7.2	1,058,330	343,449		32.4%
Lee	9.1	2,004,913	481,623		24.0%
Princess Anne	10.2	5,450,513	2,650,660		48.6%
Russell	8.5	2,013,834	960,245		42.7%
Scott	8.5	1,808,681	541,411		29.9%
Smyth	8.3	1,792,237	654,687		36.5%
Washington	6.5	2,563,651	1,184,663		46.2%
Weighted average (9 counties)	8.8%	\$ 19,823,113	\$ 7,672,801		38.7%
<hr/>					
11% through 20%					
Accomack	19.5%	\$ 1,880,329	\$ 749,567		39.8%
Albemarle	12.1	2,376,658	1,383,076		58.1%
Alleghany	20.5	937,571	497,064		53.0%
Amherst	14.1	1,250,013	592,494		47.4%
Augusta	18.1	3,242,086	1,889,013		58.2%
Bedford	16.3	1,840,200	862,889		46.9%
Bland	13.1	406,467	148,732		36.6%
Botetourt	14.9	1,452,783	796,139		54.8%
Buchanan	11.3	1,862,461	474,299		25.4%
Campbell	20.6	2,294,289	1,061,117		46.2%
Carolina	17.5	933,297	1,375,381		40.2%

TABLE 56 (continued)

Assessment Groups 112 through 20 ^a (continued)	Counties by Market Value ^a	Percentage of Assessed Valuation To Market Value ^a	Revenue		Local Revenue as a Per Cent of Total Revenue ^b
			Total ^b	From Local sources ^b	
Charlotte	18.4%	18.4%	\$ 870,100	\$ 329,570	37.88%
Clarke	20.0	20.0	581,183	303,088	52.15
Cumberland	18.0	18.0	442,092	153,314	34.68
Dinwiddie	18.2	1,186,412	542,126	45,72	
Essex	16.9	1,503,936	252,219	50,64	
Fauquier	18.0	1,657,027	906,703	54,72	
Fluvanna	17.9	742,996	431,659	58.10	
Franklin	13.1	1,517,284	536,202	35.34	
Frederick	17.2	1,351,067	591,028	43.75	
Giles	13.4	1,846,473	1,147,846	62.16	
Greene	18.1	320,223	108,445	33.87	
Greenville	19.1	1,096,045	449,831	41.04	
Hanover	12.9	1,750,289	892,632	51.00	
Henry	11.0	2,270,202	854,710	37.64	
Isle of Wight	16.9	1,268,136	546,102	43.06	
James City	19.3	759,520	412,134	54.26	
King George	19.4	465,906	197,750	42.45	
King and Queen	17.4	469,400	195,573	41.66	
King William	17.9	400,881	178,677	44.57	
Loudoun	18.2	1,776,509	1,020,537	57.45	
Louisa	16.8	824,295	322,237	39.18	
Lunenburg	19.2	837,663	309,847	36.99	
Mechlenburg	19.9	2,148,100	731,745	34.07	
Middlesex	20.1	482,983	221,775	45.92	
Montgomery	13.3	1,804,666	720,440	39.92	
Nansemond	17.6	2,003,589	692,944	34.59	
New Kent	17.5	375,022	200,559	53.48	

TABLE 56 (continued)

Counties by Assessment Groups	Percentage of Assessed Valuation To Market Value	Revenue		Local Revenue as a Per Cent of Total Revenue ^b
		Total ^b	From Local Sources ^b	
<u>1% through 20% (continued)</u>				
Northampton	19.0%	\$ 974,662	\$ 432,542	44.38%
Orange	16.1	1,062,565	555,681	53.24
Page	12.4	1,103,433	482,069	43.68
Patrick	15.8	1,080,826	395,375	36.58
Pittsylvania	20.5	3,181,209	995,597	31.30
Prince Edward	17.7	3,326,153	210,285	64.47
Prince William	16.8	3,800,096	2,222,581	58.49
Pulaski	13.8	2,095,537	942,692	44.99
Rappahannock	18.4	506,926	165,166	32.58
Rockbridge	19.8	1,557,245	764,408	49.09
Rockingham	20.9	2,712,176	1,335,125	49.23
Sherandoah	16.0	1,435,369	640,384	44.61
Southampton	15.8	1,856,826	797,550	42.95
Sussex	19.1	967,388	391,908	40.51
Tazewell	11.2	2,959,016	1,038,129	35.08
Warren	17.0	1,165,286	627,979	53.89
Wise	15.5	3,469,526	1,157,056	33.35
Wythe	15.9	1,677,589	709,505	42.29
York	17.2	1,843,806	1,020,452	55.35
Weighted average (57 counties)	<u>16.7%</u>	<u>\$82,003,787</u>	<u>\$36,977,949</u>	<u>45.02%</u>
<u>21% through 30%</u>				
Amelia	21.2%	\$ 652,881	\$ 265,213	40.62%
Appomattox	23.2	698,400	292,478	41.88
Bath	26.6	467,149	258,030	55.23
Brunswick	21.9	1,217,597	489,499	40.20
Charles City	22.4	496,305	248,927	50.16

TABLE 56 (continued)

Counties by Assessment Groups	Percentage of Assessed Market Value ^a	Revenue To ^a	Revenue From Local Sources ^b		Local Revenue as a Per Cent of Total Revenue ^b
			Total ^b	From Local sources ^b	
<u>21% through 30% (continued)</u>					
Chesterfield	29.3%	\$ 6,600,050	\$ 4,702,836		71.2%
Craig	21.3	217,837	96,670		44.3%
Culpepper	23.0	1,001,805	513,774		51.2%
Floyd	21.9	777,469	293,930		37.81
Gloucester	21.1	884,222	390,893		44.21
Goochland	21.8	618,399	279,001		45.11
Halifax	23.9	2,387,852	811,822		34.00
Highland	25.5	281,222	159,381		56.68
Lancaster	29.7	733,582	313,583		42.75
Madison	24.7	594,462	263,919		44.40
Mathews	21.4	514,045	250,812		48.79
Nelson	24.6	892,263	374,987		42.03
Northumberland	23.5	751,449	383,554		41.04
Nottoway	21.9	1,034,271	455,967		44.09
Powhatan	22.1	442,792	191,543		43.26
Prince George	28.4	1,714,541	678,590		39.58
Richmond	28.2	524,780	248,052		47.27
Roanoke	26.4	4,477,954	2,500,903		55.85
Spotsylvania	26.4	922,341	406,996		44.13
Stafford	24.2	954,896	393,709		41.23
Surry	26.9	435,908	216,099		49.57
Westmoreland	25.2	753,623	377,934		50.15
Weighted average (28 counties)	25.4	\$ 31,786,818	\$ 16,106,717		50.67%
<u>31% through 40%</u>					
Arlington	31.9	\$ 28,081,524	\$ 22,305,549		79.43%
Fairfax	31.2	35,208,401	22,683,186		64.43

TABLE 56 (continued)

Assessment Groups	Percentage of Assessed Valuation To ^a	Market Value ^a	Revenue		Local Revenue as a Per Cent of Total Revenue ^b
			Total ^b	From Local Sources ^b	
31% through 40% (continued)					
Henrico	39.7%	\$ 12,975,598	\$ 9,120,000		70.29
Norfolk	31.3	13,739,069	9,338,139		67.97
Weighted average (4 counties)	32.8%	\$ 90,004,592	\$ 63,446,874		70.49%
Total 98 counties		\$223,618,310	\$124,204,341		
Weighted average 98 counties		<u>22.3%</u>	<u>55.55%</u>		

^a State Tax Department report on percentage rates, year 1956.

^b Report of the Auditor of Public Accounts, Commonwealth of Virginia, Year Ended June 30, 1960.

TABLE 57

THE EFFECT OF REASSESSMENT OF ALL REAL ESTATE AND TANGIBLE PERSONAL PROPERTY OTHER THAN PUBLIC SERVICE CORPORATIONS,
USING A 40 PER CENT MINIMUM ASSESSMENT RATIO, 1959

Cities	Counties and Cities	Assessed Value		Tax Rate Per \$100	Total Taxes (estimated)	Total Taxes (Actual)	Increase in Tax Revenue (Estimated)
		Using 40 Per Cent Minimum Ratio	Using 40 Per Cent Minimum Ratio				
Alexandria	\$ 208,596,565	\$ 3.21 (c)	\$ 6,695,950	\$ 5,815,179	\$ 880,771		
Bristol	24,552,204	2.44 (c)	599,074	515,997	83,077		
Buena Vista	9,133,101	3.10	283,126	193,944	89,182		
Charlottesville	68,220,836	3.20	2,183,067	1,473,570	709,497		
Clifton Forge	7,274,281 (b)	3.25	236,422	236,422	---		
Colonial Heights	32,226,752 (b)	1.32 (c)	424,961	424,961	---		
Covington	20,379,626	2.95	601,199	408,826	192,373		
Danville	126,137,233 (b)	1.70 (c)	2,141,018	2,141,018	---		
Falls Church	31,351,101 (b)	2.87 (c)	900,425	900,425	---		
Fredericksburg	27,708,068 (b)	2.00	554,161	554,161	378,145		
Galax	9,771,183	6.00	586,271	208,126	672,720		
Hampton	121,031,557	2.98 (c)	3,606,740	2,934,020	61,986		
Harrisonburg	24,192,407	2.50	604,810	542,824	---		
Hopewell	33,606,196 (b)	2.51 (c)	844,562	844,562	---		
Lynchburg	110,205,037 (b)	2.85	3,140,890	3,140,890	---		
Martinsville	40,639,000 (b)	1.91	776,342	776,342	---		
Newport News	149,093,118	3.06 (c)	4,562,249	4,522,927	39,322		
Norfolk	390,918,200 (b)	3.00	11,727,546	11,727,546	---		
Norton	5,976,889	4.73 (c)	282,707	152,697	130,010		
Petersburg	56,851,390 (d)	2.75	1,563,437	1,563,437	---		
Portsmouth	114,301,349	2.54 (c)	2,903,254	2,783,415	119,839		
Radford	13,744,975	2.25	309,262	247,410	61,852		

TABLE 57 (continued)

Counties and Cities (continued)	Assessed Value Using 40 Per Cent Minimum Ratio	Tax Rate Per \$100	Total Taxes (estimated)	Total Taxes (actual)	Increase in Tax Revenue (estimated)
Richmond	\$ 825,814,030(b)	\$ 1.92(c)	\$15,867,618	\$15,867,618	\$ 984,667
Roanoke	214,637,130	2.70	5,966,912	4,982,245	—
South Norfolk	34,085,495(b)	2.36(c)	803,312	803,312	—
Staunton	39,214,035	3.20	1,254,849	718,401	536,448
Suffolk	25,554,598	3.25	830,524	639,504	191,020
Virginia Beach	27,402,891	2.83(c)	775,502	700,493	75,009
Waynesboro	31,901,421	3.25	1,036,796	707,613	329,183
Williamsburg	32,589,143	2.25(c)	733,256	361,300	371,956
Winchester	38,451,318(b)	1.58(c)	609,008	609,008	—
Total Cities	\$2,895,561,129		\$73,405,250	\$67,498,193	\$5,907,057
Counties					
Accomack	\$ 34,236,677	\$ 3.44(c)	\$ 1,177,742	\$ 573,348	\$ 604,394
Albemarle	82,972,396	3.87(c)	3,211,032	971,804	2,239,228
Allegheny	16,616,494	3.40	564,961	289,542	275,419
Amelia	13,768,906	2.60	357,992	189,735	168,257
Amherst	22,059,518	3.74(c)	825,026	290,602	534,424
Appomattox	12,417,446	2.50	310,436	180,053	130,383
Arlington	479,314,663	3.69(c)	17,686,711	14,097,768	3,588,943
Augusta	102,561,492	2.60	2,666,599	1,206,636	1,459,963
Bath	11,322,902	2.78(c)	314,777	209,562	105,215
Bedford	44,144,628	2.85	1,258,122	512,722	745,400
Botetourt	35,196,456	4.00	1,407,858	524,427	883,431
Bland	6,553,293	4.76(c)	311,937	103,825	208,112
Brunswick	24,186,740	2.70	653,042	357,540	295,502
Buchanan	45,248,708	3.00	1,357,461	699,093	658,368
Buckingham	10,855,182	2.10	2,227,959	303,068	769,738

TABLE 57 (continued)

Counties and Cities	Assessed Value Using 40 Per Cent Minimum Ratio	Tax Rate Per \$100	Total Taxes (estimated)	Total Taxes (actual)	Increase in Tax Revenue (estimated)
Counties (continued)					
Campbell	\$ 45,248,708	\$ 3.00	\$ 1,357,806	\$ 303,068	\$ 769,738
Carroll	16,633,874	2.50	465,847	203,806	262,041
Charles City	26,213,000	4.35	1,140,266	239,478	900,788
Charlotte	5,929,302	3.75	222,349	124,522	97,827
Chesterfield	16,205,565	2.90	469,961	216,182	253,779
Clarke	133,752,232	2.46(c)	3,290,305	2,407,801	882,204
Craig	16,334,042	2.65	432,852	216,435	216,417
Culpepper	4,447,812	3.30	146,778	78,159	68,619
Cumberland	30,130,808	2.15	647,812	372,505	275,307
Dickenson	9,720,200	2.60	252,725	113,726	138,999
Dinwiddie	20,109,600	6.17(c)	1,250,762	310,310	930,452
Essex	26,556,330	2.50	663,908	302,057	361,851
Fairfax	23,939,505	1.95(c)	466,820	196,804	270,016
Fauquier	546,471,574	3.76(c)	20,547,331	16,008,482	4,538,849
Floyd	67,675,578	2.10	1,421,187	639,534	781,653
Fluvanna	11,426,166	3.50	399,916	218,954	180,962
Franklin	10,545,173	2.00	210,903	94,379	116,524
Frederick	27,927,835	3.85	1,075,422	352,135	723,087
Giles	38,200,753	2.80	1,072,421	461,141	611,280
Gloucester	25,609,781	3.40	870,733	291,696	579,037
Goochland	23,688,132	2.50	592,203	312,387	279,816
Grayson	15,641,450	2.25	351,933	191,813	160,120
Greene	22,369,666	5.99(c)	1,339,943	241,038	1,098,905
Greenville	4,951,076	3.75	1,148,532	67,211	81,321
Halifax	21,290,660	2.75	585,493	279,599	305,894
Hanover	45,309,222	2.35	1,064,767	636,198	428,569
Henrico	73,768,592	2.60	1,917,924	618,553	1,299,441
Henry	223,179,003	2.27(c)	5,066,163	5,033,313	32,850
		3.50	1,812,233	5,498,423	1,313,815

TABLE 57 (continued)

Counties (continued)	Assessed Value Using 40 Per Cent Minimum Ratio	Tax Rate Per \$100	Total Taxes (estimated)	Total Taxes (actual)	Increase in Tax Revenue (estimated)
Highland	\$ 5,993,380	\$ 3.25	\$ 194,785	\$ 124,175	\$ 70,610
Isle of Wight	29,383,181	3.00	881,495	372,440	509,055
James City	19,099,318	3.44(c)	657,017	316,580	340,437
King and Queen	9,439,540	3.70	349,263	151,929	197,334
King George	10,120,269	3.00	303,629	147,260	156,369
King William	21,472,360	1.10(c)	300,613	134,060	166,553
Lancaster	18,345,094	1.70(c)	311,867	231,327	80,540
Lee	18,433,846	6.98(c)	1,286,682	292,743	993,939
Loudoun	83,841,211	2.10	1,760,665	801,103	959,562
Louise	24,142,833	2.00	482,857	280,557	202,800
Lunenburg	15,504,104	2.70	418,611	200,933	217,678
Madison	10,326,559	3.05(c)	314,960	194,189	120,771
Mathews	17,969,122	2.30	413,290	221,110	192,180
Mecklenburg	34,567,206	2.85	985,165	490,143	495,022
Middlesex	13,526,991	2.25	304,357	152,941	151,416
Montgomery	40,234,475	3.75(c)	1,508,793	501,563	1,007,230
Nansemond	36,171,955	3.13(c)	1,132,182	497,379	634,803
Nelson	11,570,179	2.85	329,750	202,796	126,954
New Kent	8,183,657	3.35	274,153	119,942	154,211
Norfolk	89,903,693	2.07(c)	1,861,006	1,457,661	403,345
Northampton	19,321,739	3.66(c)	707,176	336,250	370,926
Northumberland	24,927,370	2.10	523,475	307,541	215,934
Nottoway	19,093,654	2.90	553,716	303,176	250,540
Orange	27,108,050	3.24(c)	678,301	351,007	523,294
Page	24,668,129	4.30(c)	1,060,730	328,787	731,943
Patrick	19,211,805	3.00	576,354	227,660	348,694
Pittsylvania	67,614,010	2.00	1,352,280	693,044	659,236
Powhatan	11,061,991	2.50	1,276,550	152,794	123,756
Prince Edward	19,533,220	1.56(c)	304,718	134,785	169,933
Prince George	17,138,259	2.20	377,042	267,720	109,322

TABLE 57 (continued)

Counties and Cities	Assessed Value Using 40 Per Cent Minimum Ratios	Tax Rate Per \$100	Total Taxes (estimated)	Total Taxes (actual)	Increase in Tax Revenue (estimated)	Tax Revenue (estimated)
Counties (continued)						
Prince William	\$ 63,879,100	\$ 3.63 (c)	\$ 2,318,811	\$ 1,974,985	\$ 1,343,826	
Princess Anne	108,864,588	6.34 (c)	6,902,015	1,761,032	5,140,983	
Pulaski	41,511,246	3.90	1,618,939	558,534	1,060,405	
Rappahannock	7,846,198	3.25	255,001	117,301	137,700	
Richmond	9,394,847	2.75	258,358	182,143	76,215	
Roanoke	128,249,120	2.25	2,885,605	1,905,082	980,523	
Rockbridge	49,928,899	2.55 (c)	1,273,187	629,792	643,395	
Rockingham	72,859,138	2.70	1,967,197	1,027,860	939,337	
Russell	29,043,576	2.80	1,813,220	1,172,809	640,411	
Scott	23,606,094	5.80	1,369,153	290,945	1,078,208	
Shenandoah	46,073,862	2.60	1,197,920	479,168	718,752	
Smyth	46,322,650	4.29 (c)	1,987,242	411,913	1,575,329	
Southampton	46,487,671	3.50	1,627,068	642,692	984,376	
Spottsylvania	20,291,677	2.10	1,440,825	290,951	149,874	
Stafford	21,666,198	2.40	519,989	314,593	205,396	
Surry	11,035,301	2.30	253,812	170,689	83,123	
Sussex	17,622,468	2.80	493,430	235,613	157,817	
Tazewell	51,946,464	4.90 (c)	2,545,377	711,982	1,833,395	
Warren	31,043,482	2.40	745,044	316,644	428,400	
Washington	56,600,523	8.04 (c)	4,550,682	739,492	3,811,190	
Westmoreland	21,514,024	2.25 (c)	484,066	305,621	178,445	
Wise	45,049,135	4.64 (c)	2,090,280	810,158	1,280,122	

TABLE 57 (continued)

Counties and Cities	Assessed Value Using 40 Per Cent Minimum Ratio ^a	Tax Rate Per \$100 (estimated)	Total Taxes (estimated)	Total Taxes (actual)	Increase in Tax Revenue (estimated)
Counties (continued)					
Wythe	\$ 32,351,371	\$ 4.00	\$ 1,294,055	\$ 514,387	\$ 779,668
York	<u>33,691,465</u>	<u>2.58(c)</u>	<u>869,240</u>	<u>374,325</u>	<u>494,915</u>
Total counties	<u>\$4,299,499,692</u>		<u>\$140,763,823</u>	<u>\$ 75,250,073</u>	<u>\$65,513,750</u>
Total cities and counties	<u>\$7,195,060,821</u>		<u>\$214,169,073</u>	<u>\$142,748,166</u>	<u>\$71,420,807</u>

Sources: Report of the Department of Taxation, Commonwealth of Virginia, June 30, 1960. Department of Taxation, Local Tax Rates, Commonwealth of Virginia, Tax Year, 1959. Real Estate Assessment Study, Virginia Department of Taxation, 1956.

^aThe assessed value using 40 per cent minimum ratio was computed by taking 40 per cent of the full market value of property located therein. Full market value was ascertained by dividing the assessed values in each locality by the prevailing local assessment ratio and multiplying this figure by 100.

^bThese cities have a present assessment ratio of over 40 per cent; therefore, there was computed no change in their present ratio.

^cThese rates computed by means of a weighted average (real estate and personal property assessments divided into tax levies on same).

^dThis city has an assessment ratio of 40 per cent even.

APPENDIX D
TOWN LEVIES

A problem arises in connection with town levies. In the distribution of state collected revenues from public service corporations, both cities and counties will participate. Towns are not, however, autonomous fiscal entities in Virginia, but are included in the county in which they are located. Further, not all towns levy a tax on property; however, to fail to provide for those towns which now obtain property tax revenues would spell financial disaster for many of them. Consequently, some provision for town requirements must be made. Table 58 sheds some interesting light upon the taxing practice with respect to the towns in one company's operating area as it has existed for the years 1954 through 1959.

Since 1954 there has been a gradual increase in the statewide average rate of property tax levy, while at the same time the average rate of taxation imposed by towns in one company's operating area has shown a significant decrease. Expressed in another way, the average rate of taxation imposed by towns, upon the property of the public service corporation investigated, has declined to 16.9 per cent of the average rate imposed by cities and counties. One factor in the explanation of this trend is that the size of towns remains relatively small, alleviating the

TABLE 58

AVERAGE TAX LEVY OF TOWNS IN ONE UTILITY'S OPERATING AREA,
RELATION TO STATEWIDE AVERAGE TAX RATE ON REAL ESTATE¹

Year	Statewide Average Rate of a Taxation	Assessed Value of One Utility's Property Located in Towns	Actual Taxes Paid	Average Rate of Taxation	Per Cent of State- wide Average Tax Rate
1954	\$2.56	\$ 8,672,091	\$ 56,771	\$.65	25.4%
1955	2.54	8,878,973	61,999	.70	27.0
1956	2.60	9,743,300	65,676	.67	25.8
1957	2.64	13,638,002	72,061	.53	20.2
1958	2.68	17,618,893	83,388	.47	17.5
1959 ^b	2.72	17,774,897	81,724	.46	16.9
Total	\$2.63	\$76,326,156	\$421,618	\$.55	20.9%
	=====	=====	=====	=====	=====

Source: Data taken from reports of the Department of Taxation, Commonwealth of Virginia.

^aComputed by dividing the total assessed value of real estate subject to taxation in all taxing districts by the actual real estate taxes levied.

^bEstimated.

need for the increase in revenues which would have been obtained from the more than 100 per cent increase in investment which has taken place since 1954, taxed at the 1954 average rate. Too, the fact that the cost of schools, which comprised 74.25 per cent of all county expenditures in fiscal year 1959,² was administered mainly by the counties relieved the towns of that additional responsibility and, consequently, of the need for the same proportion of additional revenue one would expect the counties and cities to have.

From Table 58 it is observed that the average town levy as a percentage of city and county levies was, for the period 1954 through 1959, 20.9 per cent, although the trend is apparently downward. In spite of this trend, a rate of taxation equal to 20 per cent of the uniform rate so determined for cities and counties could be levied against public service corporation property specifically for towns, the allocation process to be similar to that applicable to cities and counties. That an analysis of town rates in areas other than that served by the utility investigated in this report may yield a result divergent from the 20 per cent of the statewide rate as herein computed is not material. The ready availability of data

²Report of the Auditor of Public Accounts, Commonwealth of Virginia, Year Ended June 30, 1959, p. 8.

and ease of computation resulted in this ratio in the present analysis; however, it must be pointed out that any such ratio, as long as it is fairly computed and uniformly applied between like public service corporations, is equally satisfactory. What is important, however, is that the problem of town levies can be overcome. Since the problem can be overcome, and in view of the relative immateriality of town levies, such levies are given little attention in this thesis.

APPENDIX E

TABLE 59

ASSESSED VALUE, TAXES PAID, AVERAGE TAX RATE, IN
TOWNS ONLY, ONE ELECTRIC POWER COMPANY, 1954-1958

County 1954	Town	Assessed Value	Amount of Tax	Average Tax Rate
Albemarle	Scottsville	\$ 6,729	\$ 67.29	\$1.00
Amherst	Amherst	16,249	162.49	1.00
Botetourt	Fincastle	6,073	60.73	1.00
Buchanan	Grundy	35,903	359.03	1.00
Carroll	Hillsville	40,665	813.30	2.00
Craig	New Castle	4,883	24.41	.50
Dickenson	Clintwood	35,737	893.42	2.50
	Haysi	11,283	169.24	1.50
Floyd	Floyd	9,662	96.62	1.00
Fluvanna	Scottsville	900	9.00	1.00
Franklin	Boones Mill	7,516	75.16	1.00
	Rocky Mount	69,850	1,047.76	1.50
Giles	Glen Lyn	5,958,091	8,937.14	.15
	Narrows	62,798	1,098.97	1.75
	Pearisburg	38,273	1,033.37	2.70
	Pembroke	12,327	92.45	.75
	Rich Creek	12,292	307.30	2.50
Grayson	Fries	4,670	--	--
	Trout Dale	2,662	--	--
Henry	Ridgeway	6,439	38.63	.60
Montgomery	Blacksburg	9,580	95.78	1.00
	Cambrria	11,167	111.67	1.00
	Christiansburg	56,676	566.76	1.00
Patrick	Stuart	56,270	618.97	1.10
Pulaski	Draper	2,326	--	--
	Dublin	19,363	290.45	1.50
	Pulaski	653,850	10,514.10	1.60
Roanoke	Salem	62,109	442.53	.75
	Vinton	36,078	360.78	1.00
Russell	Cleveland	12,184	60.92	.50
	Honaker	14,654	183.17	1.25
	Lebanon	23,818	273.91	1.15
Scott	Clinchport	4,709	70.64	1.50
	Duffield	1,822	--	--
	Dungannon	6,647	66.47	1.00
	Gate City	53,219	798.29	1.50
	Nickelsville	3,260	--	--
	Weber City	-	--	--

TABLE 59 (continued)

County	Town	Assessed Value	Amount of Tax	Average Tax Rate
<u>1954 (continued)</u>				
Smyth	Chilhowie	\$ 19,683	\$ 295.25	\$1.50
	Marion	148,324	3,708.10	2.50
	Saltsville	438,772	6,581.58	1.50
Tazewell	Bluefield	49,922	1,248.05	2.50
	Cedar Bluff	13,147	177.48	1.35
	North Tazewell	14,389	323.75	2.25
	Pocahontas	52,049	780.74	1.50
	Richlands	33,536	335.36	1.00
	Tazewell	36,813	736.26	2.00
Washington	Abingdon	324,972	9,749.16	3.00
	Damascus	32,604	652.08	2.00
	Glade Spring	12,709	190.63	1.50
	Saltsville	8,049	120.74	1.50
Wise	Pound	19,683	196.83	1.00
Wythe	Rural Retreat	8,156	163.12	2.00
	Wytheville	88,549	1,770.98	2.00
Total		<u>\$8,672,091</u>	<u>\$56,770.86</u>	<u>.65</u>
<u>1955</u>				
Albermarle	Scottsville	\$ 6,890	\$ 68.90	\$1.00
Amherst	Amherst	17,609	176.09	1.00
Botetourt	Fincastle	6,541	65.41	1.00
Buchanan	Grundy	39,175	587.63	1.50
Carroll	Hillsville	40,120	1,003.01	2.50
Craig	New Castle	5,189	25.95	.50
Dickenson	Clintwood	32,481	487.22	1.50
	Haysi	12,086	181.29	1.50
Floyd	Floyd	10,357	103.57	1.00
Fluvanna	Scottsville	934	9.34	1.00
Franklin	Boones Mill	7,672	76.72	1.00
	Rocky Mount	78,779	1,181.68	1.50
Giles	Glen Lyn	6,009,818	9,014.73	.15
	Narrows	69,729	1,220.26	1.75
	Pearisburg	41,965	1,133.05	2.70
	Pembroke	13,038	97.79	.75
	Rich Creek	12,625	315.63	2.50
Grayson	Fries	4,730	--	--
	Troue Dale	2,854	--	--
Henry	Ridgeway	6,603	39.62	.60
Montgomery	Blacksburg	9,672	96.72	1.00
	Cambrria	12,022	120.22	1.00
	Christiansburg	61,473	614.73	1.00
Patrick	Stuart	52,095	573.05	1.10

TABLE 59 (continued)

County	Town	Assessed Value	Amount of Tax	Average Tax Rate
<u>1955 (continued)</u>				
Pulaski	Draper	\$ 2,348	\$ --	\$ --
	Dublin	21,788	326.82	1.50
	Pulaski	664,867	10,637.87	1.60
Roanoke	Salem	67,705	582.40	.75
	Vinton	38,377	383.77	1.00
Russell	Cleveland	11,283	56.31	.50
	Honaker	15,064	188.30	1.25
	Lebanon	26,715	307.22	1.15
Scott	Clinchport	4,807	72.11	1.50
	Duffield	1,973	--	--
	Dungannon	6,765	67.65	1.00
	Gate City	54,706	820.59	1.50
	Nickelsville	3,380	--	--
	Weber City	19,185	--	--
Smyth	Chilhowie	20,396	305.94	1.50
	Marion	157,451	3,936.28	2.50
	Saltville	485,345	7,405.50	1.50
Tazewell	Bluefield	52,324	1,308.10	2.50
	Cedar Bluff	13,742	185.52	1.35
	North Tazewell	11,544	259.74	2.25
	Pocahontas	56,157	842.36	1.50
	Richlands	35,929	359.29	1.00
	Tazewell	46,950	939.00	2.00
Washington	Abingdon	322,096	12,561.74	3.90
	Damascus	33,369	667.38	2.00
	Glade Spring	13,066	195.99	1.50
	Saltville	8,355	125.32	1.50
Wise	Pound	20,603	206.03	1.00
Wythe	Rural Retreat	9,481	189.62	2.00
	Wytheville	98,765	1,975.30	2.00
Total		\$8,878,973	\$61,998.76	\$.70
<u>1956</u>				
Albemarle	Scottsville	\$ 7,135	\$ 71.35	\$ 1.00
Amherst	Amherst	19,025	190.25	1.00
Botetourt	Fincastle	7,099	70.99	1.00
Buchanan	Grundy	42,153	632.30	1.50
Carroll	Hillsville	43,080	1,077.01	2.50
Craig	New Castle	5,558	27.79	.50
Dickenson	Clintwood	36,369	545.54	1.50
	Haysi	12,515	187.72	1.50
Floyd	Floyd	11,084	110.84	1.00
Fluvanna	Scottsville	972	9.72	1.00
Franklin	Boones Mill	8,164	81.64	1.00
	Rocky Mount	84,208	1,263.12	1.50

TABLE 59 (continued)

County	Town	Assessed Value	Amount of Tax	Average Tax Rate
1956 (continued)				
Giles	Glen Lyn	\$6,689,382	\$10,034.07	\$1.75
	Narrows	71,199	1,245.08	1.75
	Pearisburg	44,346	1,197.34	2.70
	Pembroke	14,662	219.93	1.50
	Rich Creek	13,615	340.38	2.50
Grayson	Fries	1,520	--	--
	Independence	--	--	--
	Trout Dale	3,000	--	--
Henry	Ridgeway	8,388	50.33	.60
Montgomery	Blacksburg	16,731	167.31	1.00
	Cambria	13,375	133.75	1.00
	Christiansburg	63,556	635.56	1.00
Patrick	Stuart	52,708	579.78	1.10
Pulaski	Draper	2,455	--	--
	Dublin	23,946	359.19	1.50
	Pulaski	677,719	10,843.50	1.60
Roanoke	Salem	72,390	515.77	.75
	Vinton	44,340	443.40	1.00
Russell	Cleveland	7,230	36.15	.50
	Honaker	15,926	199.07	1.25
	Lebanon	36,894	424.28	1.15
Scott	Clinchport	5,425	81.38	1.50
	Duffield	2,174	--	--
	Dungannon	7,570	75.70	1.00
	Gate City	56,077	841.46	1.50
	Nickelsville	4,161	--	--
	Weber City	22,920	--	--
Smythe	Chilhowie	22,546	338.19	1.50
	Marion	262,814	6,570.35	2.50
	Saltsville	490,592	7,358.88	1.50
Tazewell	Bluefield	56,579	1,414.48	2.50
	Cedar Bluff	14,393	194.31	1.35
	North Tazewell	11,833	266.24	2.25
	Pocahontas	40,359	605.39	1.50
	Richlands	36,199	361.99	1.00
	Tazewell	40,712	814.24	2.00
Washington	Abingdon	323,223	11,312.80	3.50
	Damascus	35,516	887.90	2.50
	Glade Spring	14,101	211.51	1.50
	Saltville	8,526	127.89	1.50
Wise	Pound	21,735	217.35	1.00
Wythe	Rural Retreat	9,940	198.80	2.00
	Wytheville	105,141	<u>2,102.82</u>	2.00
Total		\$9,743,300	\$65,675.74	\$.67

TABLE 59 (continued)

County	Town	Assessed Value	Amount of Tax	Average Tax Rate
<u>1957</u>				
Albemarle	Scottsville	\$ 6,657	\$ 66.57	\$1.00
Amherst	Amherst	19,859	198.59	1.00
Botetourt	Fincastle	7,345	73.45	1.00
	Troutville	11,698	--	--
Buchanan	Grancy	56,318	844.77	1.50
Carroll	Hillsville	41,992	1,049.81	2.50
Craig	New Castle	5,802	29.01	.50
Dickenson	Clintwood	40,008	600.12	1.50
	Haysi	14,176	212.64	1.50
Floyd	Floyd	12,023	120.23	1.00
Fluvanna	Scottsville	999	9.99	1.00
Franklin	Boones Mill	9,106	91.06	1.00
	Rocky Mount	84,635	1,269.55	1.50
Giles	Glen Lyn	10,401,451	15,602.18	.15
	Narrows	69,758	1,220.77	1.75
	Pearisburg	86,630	2,339.01	2.70
	Pembroke	17,252	258.78	1.50
	Rich Creek	14,922	373.05	2.50
Grayson	Fries	1,524	--	--
	Independence	15,440	--	--
	Trout Dale	3,128	--	--
Henry	Ridgeway	9,008	54.05	.60
Montgomery	Blacksburg	16,814	168.14	1.00
	Cambria	13,601	136.01	1.00
	Christiansburg	62,268	622.68	1.00
Patrick	Stuart	53,480	588.28	1.10
Pulaski	Draper	2,529	--	--
	Dublin	24,730	370.95	1.50
	Pulaski	724,887	11,650.69	1.60
Roanoke	Salem	68,406	487.39	.75
	Vinton	47,917	479.17	1.00
Russell	Cleveland	12,082	120.82	1.00
	Honaker	16,289	203.61	1.25
Scott	Lebanon	38,871	447.02	1.15
	Clinchport	5,773	86.60	1.50
	Duffield	2,257	--	--
	Dungannon	7,824	78.24	1.00
	Gate City	54,098	811.47	1.50
	Nickelsville	4,407	--	--
Smythe	Weber City	25,054	--	--
	Chilhowie	24,087	361.31	1.50
	Marion	265,632	6,640.80	2.50
	Saltville	518,563	7,778.45	1.50

TABLE 59 (continued)

County	Town	Assessed Value	Amount of Tax	Average Tax Rate
<u>1957 (continued)</u>				
Tazewell	Bluefield	\$ 59,480	\$ 1,487.00	\$2.50
	Cedar Bluff	15,042	203.07	1.35
	North Tazewell	11,982	269.60	2.25
	Focahontas	33,173	497.50	1.50
	Richlands	36,375	363.75	1.00
	Tazewell	39,382	787.64	2.00
Washington	Abingdon	323,837	9,180.94	2.84
	Damascus	36,283	907.08	2.50
	Glade Spring	14,666	219.99	1.50
	Saltville	9,077	136.15	1.50
Wise	Pound	22,559	225.59	1.00
Wythe	Rural Retreat	10,643	212.86	2.00
	Wytheville	<u>106,203</u>	<u>2,124.06</u>	<u>2.00</u>
Total		<u>\$13,638,002</u>	<u>\$72,060.57</u>	<u>\$.53</u>

1958

Albemarle	Scottsville	\$ 6,893	\$ 68.93	\$ 1.00
Amherst	Amherst	22,173	221.73	1.00
Botetourt	Fincastle	7,883	78.83	1.00
	Troutville	13,450	--	--
Buchanan	Grundy	74,887	1,123.30	1.50
Carroll	Hillsville	43,612	1,090.31	2.50
Craig	New Castle	6,872	34.36	.50
Dickenson	Clintwood	36,011	540.16	1.50
	Haysi	16,171	242.56	1.50
Floyd	Floyd	12,745	127.45	1.00
Fluvanna	Scottsville	1,039	10.39	1.00
Franklin	Boones Mill	10,264	102.64	1.00
	Rocky Mount	86,726	1,300.89	1.50
Giles	Glen Lyn	14,183,076	17,019.69	.12
	Narrows	61,215	1,071.26	1.75
	Pearisburg	109,567	2,958.31	2.70
	Pembroke	17,974	269.61	1.50
	Rich Creek	15,731	393.27	2.50
Grayson	Fries	1,527	--	--
	Independence	17,514	--	--
	Trout Dale	3,273	--	--
Henry	Ridgeway	9,172	55.03	.60
Montgomery	Blacksburg	21,637	216.37	1.00
	Cambria	14,063	140.63	1.00
	Christiansburg	65,832	658.32	1.00
Patrick	Stuart	61,557	677.35	1.10

TABLE 59 (continued)

County	Town	Assessed Value	Amount of Tax	Average Tax Rate
1958 (continued)				
Pulaski	Draper	\$ 2,763	\$ --	\$ --
	Dublin	26,175	523.50	2.00
	Pulaski	712,233	11,395.72	1.60
Roanoke	Salem	70,586	502.93	.75
	Vinton	51,319	513.19	1.00
Russell	Cleveland	7,581	75.81	1.00
	Honaker	16,712	208.90	1.25
Scott	Lebanon	39,226	451.09	1.15
	Clinchport	5,968	89.52	1.50
	Duffield	2,368	--	--
	Dungannon	7,599	75.99	1.00
	Gate City	53,817	807.26	1.50
	Nickelsville	4,778	--	--
Smythe	Weber City	25,862	--	--
	Chilhowie	26,214	393.21	1.50
	Marion	273,285	6,832.13	2.50
Tazewell	Saltville	636,686	9,550.29	1.50
	Bluefield	63,516	1,587.90	2.50
	Cedar Bluff	15,762	212.80	1.35
	North Tazewell	12,413	279.29	2.25
	Pocahontas	31,609	474.13	1.50
	Richlands	39,963	399.63	1.00
Washington	Tazewell	41,143	822.86	2.00
	Abingdon	328,681	15,993.62	4.87
	Damascus	27,036	675.90	2.50
	Glade Spring	15,987	239.81	1.50
Wise	Saltville	10,131	151.97	1.50
Wythe	Pound	24,271	242.71	1.00
	Rural Retreat	11,075	221.50	2.00
	Wytheville	113,270	2,265.40	2.00
Total		\$17,618,893	\$83,388.45	\$.47

APPENDIX F

COMPUTATION OF OPERATING REVENUES, APPALACHIAN POWER COMPANY, 1959

The operating revenues of this company, broken down by cities and counties, was unobtainable under the present accounting system; however, with recodification in billing and minor modification in the computer analyses made by the company this data could be made available without substantial additional cost to the company. It was possible, however, with the existing system, to arrive at a reasonably close estimate of each locality's contribution to company operating revenues.

Two company divisions operate in Virginia, and there exist certain differences in the rate, billing process, and accounting. Accordingly, it was necessary to obtain separate computations for each division. Total company revenues were computed from available data as follows:

Roanoke Division	\$21,745,642
Bluefield Division	<u>18,939,160</u>
Total	<u>\$40,684,802</u>

In each division, certain revenues were known, including industrial revenues, revenues from public street and highway lighting, and sales made to non-associated utilities. Further, the revenues from certain cities imposing a municipal tax were also known. In each division, the subtraction of these known amounts from total revenues

left an amount which could be attributable to the remaining cities and counties. There was no way of accurately apportioning this residual; however, since the rates within each were substantially the same, and since the large users of power had already been determined, it was felt that an allocation made on the basis of watt-hour meters would provide a close approximation as to operating revenues generated within each county and city. Tables 60 and 61 show further how this computation was made.

TABLE 60

COMPUTATION OF REVENUES TO BE ALLOCATED ON BASIS
OF WATT-HOUR METERS, APPALACHIAN POWER COMPANY,
ROANOKE DIVISION, 1959

Total revenues	\$21,745,642
Deduct:	
Account 602.2, industrial revenues	\$4,652,657
Account 603, public street and highway lighting	17,389
Account 605.2, electric utility, non-associated	1,106,918
City of Roanoke	5,623,163
City of Lynchburg	<u>3,484,366</u>
Total	<u>14,884,493</u>
Balance to be allocated	<u><u>\$ 6,861,149</u></u>
Total number of watt-hour meters in Roanoke Division, exclusive of deductions above	61,710
Average revenue per watt-hour meter	\$111.18
	<u><u> </u></u>

TABLE 61

COMPUTATION OF REVENUES TO BE ALLOCATED ON BASIS
OF WATT-HOUR METERS, APPALACHIAN POWER COMPANY,
BLUEFIELD DIVISION, 1959

Total revenues	\$18,939,160
Deduct:	
Account 602.2 and 602.3, industrial revenues	\$6,745,752
Account 603, public street and highway lighting	109,356
Account 605.2, electric utility, non-associated	637,739
City of Galax	<u>549,402</u>
Total	<u>8,042,249</u>
Balance to be allocated	\$10,896,911
<hr/>	
Total number of watt-hour meters in Bluefield Division, exclusive of deductions above	109,926
Average revenue per watt-hour meter	<u>\$99.13</u>
<hr/>	

In tables 62 and 63 each locality's revenues generated is computed by multiplying the number of watt-hour meters by the appropriate average revenue per meter for that division, and then adding back the deductions listed in tables 60 and 61.

TABLE 62

COMPUTATION OF CITY AND COUNTY REVENUES, APPALACHIAN POWER COMPANY, ROANOKE DIVISION, 1959

Cities	Watt-Hour Meters	Add Account 602.2	Add Account 603	Add Account 605	Add Account 605 Eliminations ^b	Total Revenues
Danville ^b	\$ ---	\$1,236,570	\$ ---	\$ ---	\$ ---	\$ 1,236,570
Lynchburg ^b	10,674	70,048	---	---	510,858	3,484,366
Martinsville	---	---	---	---	---	591,580
Roanoke ^b	---	---	---	---	---	5,623,163
Counties						
Albemarle	175,115	180,518	---	---	---	355,633
Amherst	594,499	23,687	3,601	---	---	621,787
Appomattox	556	---	---	---	334,545	556
Bedford	575,487	247,266	1,220	---	---	1,157,298
Botetourt	374,355	650,919	---	---	1,026,494	556
Buckingham	552,556	80,698	842	---	634,234	59,974
Campbell	552,694	80,698	602	---	55,258	55,258
Craig	59,372	---	---	---	---	7,868
Floyd ^c	55,258	---	752	---	1,072,915	1,072,915
Fluvanna	7,116	---	3,146	---	1,840,493	1,840,493
Franklin	912,819	156,950	737	---	1,223	1,223
Henry	1,239,699	600,057	---	---	406,318	406,318
Montgomery ^c	1,223	---	488	---	590,905	590,905
Nelson	148,097	257,733	2,249	---	---	---
Patrick ^c	474,755	113,901	---	---	---	---

TABLE 62 (continued)

Counties (cont. inued)	Watt-Hour Meters	Add		Add		Total Revenues
		Account 602.2	Account 603	Account 605	Account 605	
Times Ave.	Revenues ^a	Eliminations ^b	Eliminations ^b	Eliminations ^b	Eliminations ^b	
Pittsylvania	\$ 65,932	\$ 52,245	\$ 3,752	\$ 261,515		\$ 118,177
Roanoke	1,612,942	982,065				2,860,274
Totals	\$6,361,149	\$4,652,657	\$17,389	\$ 1,106,918		\$21,745,642

^a These figures have been computed by multiplying the average revenue per watt-hour meter, as shown in Table 60, by the number of watt-hour meters as shown in Table 46.

^b These figures were prepared by Appalachian Power Company from its records.

^c These localities are served by both the Roanoke Division and the Bluefield Division. Total revenues generated by these localities, therefore, can be obtained by adding the revenues shown in this table with those computed in Table 63.

TABLE 63

COMPUTATION OF CITY AND COUNTY REVENUES, APPALACHIAN POWER COMPANY, BLUEFIELD DIVISION, 1959

Cities	Watt-Hour Meters	Add Account 602	Add Account 603	Add Account 605	Add Eliminations ^c	Total Revenues
Counties	Times Avg. Revenues	\$	\$	\$	\$	\$
Blair	185,471	4,584	5,652	5,652	---	190,055
Blair	991,394	639,696	2,784	2,784	---	1,636,742
Buchanan	557,802	353,412	9,060	9,060	---	913,998
Dickenson	298,380	898,644	2,952	2,952	---	307,440
Floyd	735,442	234,984	16,368	16,368	---	1,637,038
Carroll	558,496	111,108	948	948	---	809,848
Giles	522,413	64,008	5,880	5,880	181,961	634,469
Grayson	760,720	431,064	16,308	16,308	---	1,012,569
Montgomery ^d	57,991	2,181	---	---	---	57,991
Patrick ^d	913,280	615,297	682,164	682,164	5,100	1,360,652
Pulaski ^d	431,064	1,232,874	147,372	147,372	8,388	2,181
Roanoke ^d	2,407,956	1,899,600	2,342,204	2,342,204	11,268	3,363,135
Russell	113,413	131,772	12,060	12,060	9,288	1,700,551
Scott	712,939	1,232,874	147,372	147,372	8,388	1,040,660
Smyth	943,911	1,899,600	2,342,204	2,342,204	11,268	3,363,135
Tazewell	113,413	131,772	12,060	12,060	9,288	1,700,551
Washington	113,413	131,772	12,060	12,060	9,288	1,040,660

TABLE 63 (continued)

Watt-Hour Meters Times Ave.		Add Account 602a	Add Account 603	Add Account 605	Total Revenues
Revenues ^b		Eliminations ^c	Eliminations ^c	Eliminations ^c	
Counties (continued)					
Wise	\$ 204,702	\$ 274,992	\$ 2,412	\$ ---	\$ 207,114
Wythe	704,018	9,948	---	---	988,958
Totals	\$10,896,911	\$6,745,752	\$109,356	\$637,739	\$18,939,160

^aThis is a combination of Accounts 602.2 and 602.3, industrial revenues.

^bThese figures have been computed by multiplying the average revenue per watt-hour meter as shown in Table 61, by the number of watt-hour meters as shown in Table 46.

^cThese figures were prepared by Appalachian Power Company from its records.

^dThese counties are served by both the Roanoke Division and the Bluefield Division. Total revenues generated by these counties, therefore, can be obtained by adding the revenues shown in this table with those computed in Table 62.

BIOGRAPHICAL SKETCH

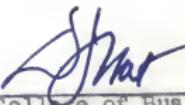
James Earl Brown was born October 6, 1932, at Ashland, Kentucky. In August, 1949, he was graduated from Thomas Jefferson High School at Richmond, Virginia. In June, 1954, he received the degree of Bachelor of Science from the University of Richmond. From 1954 until 1957 he served as an Instructor of Finance and Accounting and in Special Services with the United States Army. In 1957, he enrolled in the Graduate School of Michigan State University. He worked as an Instructor of Accounting until June, 1958. He received the degree of Master of Arts in 1958.

In 1958 he enrolled in the Graduate School of the University of Florida. He worked as a half-time Instructor of Accounting until June, 1960, while pursuing his work toward the degree of Doctor of Philosophy. From September, 1960, until August, 1961, he worked as Assistant Professor of Accounting, Finance and Statistics at the University of Washington. From September, 1961, until the present time he has worked as Assistant Professor of Business Administration at Emory University.

James Earl Brown is married to the former Mae Maxine McAlister. He is a member of the American Accounting Association, the American Association of University Professors, the Southern Economics Association, the American Association of Management Consultants, Beta Alpha Psi, and Phi Delta Theta.

This dissertation was prepared under the direction of the chairman of the candidate's supervisory committee and has been approved by all members of that committee. It was submitted to the Dean of the College of Business Administration and to the Graduate Council, and was approved as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

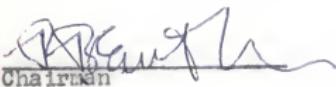
August, 1962



Dean, College of Business
Administration

Dean, Graduate School

Supervisory Committee:



Chairman

